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FEASIBILITY STUDY OF THE AVAILABILITY OF INTERNATIONAL PETROLEUM SUPPLY DATA

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

April 1971

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INTRODUCTION

The Bureau of Mines under a project for the Air Pollution Control Office, Environmental Protection Agency, performed a library research and telephone survey to determine the availability of source materials which provide supply-demand statistics for foreign countries. Special effort was made to determine the availability of sources which report the sulfur content of crude oil and residual fuel oil. The study was directed toward the development of an information system which would provide data on a current and continuing basis covering the production, refining, trading, and consumption of petroleum in foreign areas.

The work program included an investigation of published information and conversations with persons knowledgeable in both domestic and foreign operations. Efforts were made to identify gaps in information, reporting periods, and intervals between reporting periods and publication availability in Washington, D. C.

Although the project was directed to recommending procedures for maintaining a data system, it became obvious that essentially no foreign sulfur-content information has been published. Many petroleum companies operating abroad as well as foreign government agencies are not required to report such information.

The report recommends possible means for improving the timeliness of the Bureau of Mines' publication, International Petroleum Annual and identifies two methods for collecting sulfur content data of select petroleum commodities.

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DEFINITIONS OF TERMS

Proved crude oil reserves - Crude oil in known reservoirs that could be recovered under current economic and technological conditions.

Residual fuel oil - For the purposes of this report, residual fuel oil is a refined product with a viscosity of more than 45 Saybolt seconds Universal at 100° F. It includes Nos. 4, 5, and 6 fuel oils.

Residual fuel oil desulfurization - The process whereby the sulfur content of residual fuel oil is reduced. It may be accomplished either directly by processing the residual fuel oil in reactors and separators or indirectly by processing gas-oil in reactors and separators and blending the low-sulfur effluent with residual fuel oil.

SUMMARY

A complete inventory of available source material has revealed that approximately 500 publications must be perused for extractive data in order to obtain annual foreign petroleum supply and demand statistics. These publications, reports, dispatches, letters, etc., are available in Washington three months to three years after December 31 each year. About 98 percent of these data are available after a 14-month lag. An estimated three-fourths of the statistics are available only on an annual basis. There is a dearth of information on the Soviet bloc countries and on petroleum consumption, for all but developed and several other countries. However, apparent consumption can be computed for most of the remaining countries. The only supply and demand statistics that classify foreign crude oil or refined petroleum products by sulfur content are those for United States residual fuel oil imports by country of origin and Japanese crude oil imports.

International Petroleum Annual (IPA), a Bureau of Mines report compiled from the sources mentioned above is the most comprehensive worldwide petroleum supply and disposal publication available. This annual reports for each of the 116 free-world countries the production, trade, consumption and bunkering of crude oil and each major refined product but does not include

statistics relating to sulfur content. IPA is published about 14 months after the year reported and about 2 percent of the figures are estimates. It is believed that with the funding of $25,000 for the purchase of United Nations machine tabulation runs and the procurement of preprint data of the Organization for Economic Cooperation and Development (OECD) together with an increase in estimations to about 15 percent, IPA could be published three to four months earlier.

Prospects for having sulfur content data incorporated into the present reporting system are not encouraging. It is doubtful that many foreign governments could supply the sulfur level of refined products since companies are not required to report this information. Generally the only sources of sulfur content information are the files of refining companies. All refineries have laboratories for analyzing product characteristics. U.S. companies own 28 percent of the foreign capacity including their share in refineries owned in part by other foreign nationals. The capacity of all refineries in which U.S. companies have ownership is 37 percent of the foreign total. At best, it appears that with full cooperation of the U.S. companies about one-third of world refining and shipment operations and statistics, including sulfur content data, could be made available.

EVALUATION OF AVAILABLE SOURCE MATERIAL

Crude Oil Reserves

Currently three major U.S. petroleum periodicals publish annual estimates of world proved crude oil reserves by country. None of these annual figures provide the sulfur content of the reserves. Often, when a new field is discovered the sulfur of the crude oil is reported; however, new field reserves are rarely made available except for broad "estimates" for major world finds.

Piecemeal data on proved reserves by field or company are occasionally published in a variety of miscellaneous sources some of which have been received on a company confidential basis. In total, reporting by oilfield is too sparce to accurately classify world reserves by sulfur content categories. Based on a Bureau of Mines 1968 order-of-magnitude estimate, 80 billion barrels or 17 percent of foreign proved reserves have a sulfur content of 0.5 percent or less.

Crude Oil Production

Production of crude oil in foreign areas is reasonably well reported. Annual data are published in many petroleum journals, both domestic and foreign. These data, however, reflect the poor reliability of secondary and tertiary sources. As a rule, the lag in reporting by these sources varies from two to four months.

The most reliable sources are the responses to the Bureau of Mines Annual Minerals Production Questionnaire which is sent to each Department of State Foreign Service post responsible for minerals reporting. The lag time in receiving these responses varies from six to eight months. Foreign Service Officers usually obtain their data from government sources; however, some solicit statistics from U.S. and British oil company officials when necessary. The most reliable sources for certain countries are oil company annual reports, some of which provide production by field. Production statistics for countries not having U.S. Foreign Service representatives are obtained by correspondence or estimations. Normally sulfur levels are not included with crude oil production data.

Other than piecemeal reporting from a variety of sources, the only readily available source of monthly production statistics by country is the magazine "World Petroleum." The reliability of individual country data in this publication varies, however, world totals are reasonably accurate. The information has a two-month lag.

Crude Oil and Refined Product Trade

There are no uniform coordinated published sources of foreign crude oil and refined product imports and exports by country. The United Nations provides tabulation machine runs for approximately 50 countries, however, the Bureau of Mines

does not subscribe to this service. Principal secondary sources are the quarterly and annual publications of the Organization for Economic Cooperation and Development (OECD). This organization includes all eighteen West European countries plus Turkey, Japan, Canada, and the United States. Only the annual petroleum report of OECD gives imports and exports of crude oil and of each major refined product by countries of origin and destination. This report has a lag time of about 11 to 13 months and is reliable.

Another comprehensive source of petroleum trade, as well as other items of supply and demand, is the United National Annual World Energy Supplies (Series J). Although this report gives a wealth of data, it is historical in nature, usually being published 22 months after the year reported. Furthermore, product classifications in this publication are too generalized to disclose specific residual fuel oil statistics. Even though belated, this U.N. report is the only source for a matrix of world crude oil movements by major importing and exporting countries.

Most countries publish official foreign trade statistics. Those of the industrialized nations are delivered in Washington about four to ten months after the reporting period. Those of the developing countries may be up to three years late. Nearly all foreign trade books identify crude oil and each refined product.

Except for the industrialized countries, a few Latin American nations, and the British Commonwealth countries (present and former), there are few official trade publications which list quantities by country of origin and destination.

No trade book gives the sulfur content of petroleum trade. The only known sources are the Oils Import Administration's figures on U.S. residual fuel oil imports and the Japanese Government's data on the imports of their crude oil.

Refining Capacity and Production

Three U.S. and one British magazine publish annual issues which give the primary (atmospheric) distillation capacity and the major secondary processing capacities of each foreign refinery. Although there are discrepancies, many of which reflect differences in publication data, they generally agree and are of equal reliability regarding primary distillation capacities. Concerning secondary processing facilities, "World Petroleum" magazine is the most detailed and probably the most reliable. None of the magazines adequately or reliably provides the residual fuel oil desulfurization capacity of foreign refineries.

Foreign refinery output statistics are also available from a variety of miscellaneous sources. Perhaps the most complete is the collective responses to the Bureau of Mines Annual Minerals Production Questionnaire. Respondents to the questionnaires are

foreign service employees who receive their data from foreign government personnel or reports. Most reporters have no petroleum industry experience and are not qualified to detect obvious errors. Consequently, some questionnaire responses on refined products output are unreliable and inadequate. Neither these reports nor any other published material provide the sulfur level of any refined product, including residual fuel oil. Other collection sources are oil companies, foreign governments, and international organizations. These, however, are either too few or too old to be of much value in computing world totals.

Refined Products Consumption and International Bunkering

Data on the consumption and bunkering of petroleum products by type of product is the most difficult item of supply and demand to secure as most nations do not publish petroleum sales data. U.N. Series J information lags by nearly two years and product categories are too general for specific residual fuel oil information. The OECD Oil Supplies report gives excellent coverage for the developed countries, but it is approximately one year late and does not provide any sulfur information. Only a few developing countries compile petroleum consumption figures. Consumption by end-use is available for only the OECD countries and a few British Commonwealth and Latin American countries. No sources present the sulfur level of products consumed.

ANALYSIS OF FOREIGN REFINERIES

At the end of 1970 there were an estimated 540 foreign refineries with a throughput capacity of 38,130,435 barrels per day. The following tabulates capacities by major geographic areas:

Area	Number of Refineries	Capacity barrels per day
Canada	42	1,491,670
Central America	21	1,860,800
South America	61	3,601,460
Western Europe	169	15,114,985
Africa	27	644,800
Middle East	31	2,490,360
Asia and the Far East	95	6,128,060
Total Foreign Free World	446	31,332,135
Sino-Soviet Area est.	100	6,798,300
Total Foreign Area	546	38,130,435

United States companies own all or part of 188 of these plants with an aggregate capacity of 14,229,900 barrels per day. The latest data on total foreign refinery operations is for 1969. During that year, foreign refinery capacity was about 33,922,000 barrels per day and refinery throughput totaled 11,320,903,000 barrels or 31,016,172 barrels per day. Output of world refineries (excluding the Sino-Soviet area), which totaled 13,172,175,000 barrels in 1969, is given by individual refining country and type of product in Table 1. No data are available on the output of residual and distillate fuel oils by sulfur content.

Facilities for desulfurizing residual fuel oil at foreign refineries are concentrated in three areas; Japan, the Caribbean area, and the Persian Gulf area. The first foreign residual fuel oil desulfurization unit was built in Japan in 1967. It was built to process residual products from high-sulfur Middle East crude oil. With the passage of air quality legislation in Japan that year, plans for other desulfurization facilities proliferated. Because of the increasing difficulty in marketing high-sulfur Kuwait and Neutral Zone crude, two plants were built in Kuwait, one an all-hydrogen refinery. Since the establishment of air quality standards in metropolitan areas of the United States, four plants have been built in the Caribbean to process products from high-sulfur Venezuelan crude. At the end of 1970 the capacity of all foreign facilities built to lower the sulfur content of residual fuel oil was 720,260 barrels per day. Known plants under construction at that time totaled 326,500 barrels per day. Data on each plant is given in Table 2.

Over half (54%) of the foreign capacity in operation is at Japanese refineries. All of the output from these units is marketed in Japan and presumably not readily available for exportation. Although specific data are not available, most of the output from the Persian Gulf facilities is believed to be shipped to Japan, whereas that from the Caribbean plants is exported to the United States.

Expansion plans include the construction of four plants in the Caribbean area by 1972 having a combined capacity of 215,500 barrels per day. When completed, Caribbean desulfurization plants will have a total capacity of 483,500 barrels per day.

For the most part capacity of direct residual fuel oil desulfurization units means the maximum rate at which high-sulfur residual fuel oil (as high as 6.3% sulfur) can be desulfurized to 1% S. No foreign scheme reduces the sulfur content level to less than 1% S using the direct method.

Indirect processing capacities are maximum rate at which vacuum gas-oil may be sulfurized prior to blending with high-sulfur residual fuel oil. The sulfur level of the vacuum gas-oil desulfurized varies from 0.1% to 0.3%. Output sulfur levels vary according to the sulfur content of the charge.

ANALYSIS OF FOREIGN TRANSPORT PATTERNS

Petroleum is the principal commodity of international transport. In 1969 world exports and reexports of petroleum were an estimated 10.3 billion barrels. These shipments were valued at $25 billion or 8 percent of the world's total. By weight, petroleum accounted for more than one-third of the world's ocean shipments. Crude oil accounts for three-fourths of the petroleum shipments and refined products, the remainder. Table 3 gives exports and reexports of crude oil by countries and imports of crude by countries. Table 4 gives exports and reexports of refined products by countries and Table 5 gives imports of refined products by countries. A matrix of crude oil flow by origins and destinations is given for 1965 through 1968 in Table 6, these are the latest available. A similar matrix of refined products is not available.

Major petroleum trading consists of crude oil shipments from the Persian Gulf area to both Western Europe and Japan and from North Africa to Western Europe. Less important petroleum routes are those carrying crude oil and refined products from the Caribbean area to North America, Western Europe, and South America; from the U.S.S.R., to Western Europe; and from Canada to the United States.

Table 7 graphically illustrates the estimated flow of free-world petroleum trade in 1970. Based on these data, which excludes most intra-area trade, over one-half of world petroleum shipments originate in the Persian Gulf area as shown below:

	Percent
Persian Gulf area	54
North Africa	17
Caribbean	15
West Africa	4
U.S.S.R. *	4
Canada	3
Indonesia	2
Other areas	1
World total	100

* To free-world only.

Western Europe receives most of these shipments as seen by the following tabulation:

	Percent
Western Europe	52
Japan	20
United States	14
South America (Excluding Venezuela)	6
Canada	3
Other areas	5
World total	100

Other than imports of residual fuel oil (including No. 4 distillate fuel oil) into the United States, no data on the transport of petroleum by sulfur content is available except for crude oil imports into Japan. These are listed for 1969 in Table 8.

CONCLUSIONS AND RECOMMENDATIONS

Efforts to improve the present collection system now being used by both the Bureau of Mines and the United Nations will be difficult and complex because of the disinterest of foreign political entities and the confidentiality of company statistics. The placement of additional statistical collection requirements on the Department of State would be hindered by budgetary limitations. The magnitude of the task may be illustrated as follows. Of the world's political entities (nations, dependencies, protectorates, etc.) there are 177 which import refined petroleum products, 90 which export products, and 60 that produce crude oil. Furthermore, 93 have at least one of the 540 foreign refineries.

Except for a few foreign countries there is a lack of published information on the sulfur level of either crude oil or refined products. It is doubtful that any foreign country except Japan could provide the sulfur level of petroleum commodities. In general, foreign governments do not require reporting on the sulfur level of petroleum.

Because of proprietary reasons, few foreign government companies have cooperated with either the Bureau of Mines or the Foreign Service in the collection of petroleum statistics. They believe the exchange of information not to be in their best interest. The amount of statistical information received by the Bureau of Mines has been sparce and in response to specific ad hoc

requests. The large international foreign oil companies such as British Petroleum, Royal Dutch Shell, Ente Nazionale Indrocarburi (Italian), and Compagnie Francaise des Petroles do not give detailed supply and demand data to the Bureau of Mines or the Foreign Service concerning their foreign holdings.

In only a very few cases does the Bureau of Mines receive company confidential data from foreign subsidiaries of U.S. oil companies. These data are limited to production statistics from 12 refineries. None of these reports include figures on the sulfur level of residual fuel oil produced or shipped. According to Bureau of Mines investigations, U.S. companies own all or part of the 188 foreign refineries which account for 37 percent of foreign refining capacity. U.S. companies are the majority owners (50 percent or more) of 140 of these refineries. With full cooperation, these U.S. companies can, at best, supply about one-third of total foreign refining and shipment statistics. Studies of these data, if obtained, would be required to determine the value of such statistics for purposes of estimating world totals. According to oil company officials in New York, detailed refinery production data including the sulfur level of refinery production and shipments are maintained at subsidiary level and not at headquarters' offices.

During the past five years economic and statistical reporting by the Foreign Service (Department of State) has been reduced

because of budget restrictions. A larger portion of Foreign Service reporting now covers political developments, a condition which conforms to what the State Department considers their primary mission. State now collects and reports annual crude oil and refinery production statistics only, excluding sulfur level data. In general, most of the information now being reported by foreign posts is obtained from foreign government publications. In a few cases Foreign Service officers have privately obtained information from friendly officials, both foreign government and company. Based on previous confrontations with economic reporting coordinators in the State Department it is believed that any request for additional reporting on a continuing or repetative basis would be very closely examined. Essentially, all ad hoc requests are honored. The success of State Department Foreign Service efforts to collect ad hoc sulfur content data hinges on their entree to U.S. and foreign oil company statistics.

The study revealed no sources which give for foreign areas the sulfur content of distillate fuel oils produced, consumed, or traded internationally. Two principal sources available in Washington give foreign petroleum price information. The first, Platt's Oilgram Price Service which gives daily price changes and annual quotations for nine major refined product trading countries. The second, The Petroleum Times, a British fortnightly magazine gives

the latest refined product prices for eighteen foreign countries, most of which are European. Both publications are reliable but do not contain fuel quality data.

In conclusion, the Bureau of Mines recommends three avenues of approach toward improving the Bureau of Mines present reporting system and for expanding present collection programs.

1. Improve the timeliness of Bureau of Mines publication, International Petroleum Annual, by the acquisition of data from United Nations and possibly from the Organization of Economic Cooperation and Development. This will not provide additional information on the sulfur content of fuel oils.

2. Request State Department foreign service posts for repetitive reporting on the sulfur content of crude oil, residual fuel oil, and distillate fuel oil produced, imported, and exported. This is essential for development of a complete system.

3. Request U.S. companies having foreign affiliates to report the sulfur content of distillate and residual fuel oil produced, consumed, and traded. This is only a partial solution.

The degree of success in accomplishing the above will determine the feasibility of developing a data system. If all of the above areas of improvement can be successfully implemented, a second study should be initiated to delinate, design and plan for the maintenance of a data system. Without the above, a data system is not possible. An essential prerequisite for computerized data system is reliable, timely high quality data.

TABLE 1 - Output of refined products, 1949 1/

(Thousands of barrels)

Country or area	Gasoline		Kerosine and jet fuel		Distillate fuel oil	Residual fuel oil	Lubricants (including greases)	Other 2/	Refinery fuel and loss	Total output of refined products
	Aviation (as reported)	Total (incl. motor and aviation)	Jet fuel (as reported)	Total (incl. kerosine and jet fuel)						
North America:										
Bermuda	0	0	0	0	0	0	0	0	0	0
Canada	1,416	156,655	11,312	31,619	134,059	64,041	1,464	33,901	27,545	433,841
Mexico	551	46,629	2,681	14,256	27,541	43,175	1,421	23,479	13,573	164,925
United States	26,460	2,027,407	127,700	427,438	846,863	263,976	65,098	347,092	221,966	4,182,732
Total		2,229,691		469,313	992,632	371,685	68,447	404,427	251,603	4,785,638
Central America and Caribbean:										
Costa Rica	0	510	0	144	884	370	0	4	274	2,386
Cuba*	0	8,845	1,518	2,467	7,212	16,913	0	1,329	1,344	37,960
Dominican Republic	0	0	0	0	0	0	0	0	0	0
El Salvador	0	575	69	296	548	743	0	74	134	2,366
Guatemala	0	1,281	218	580	1,586	1,738	0	95	117	5,539
Haiti	0	0	0	0	0	0	0	0	0	0
Honduras, British	0	0	0	0	0	0	0	0	0	0
Honduras, Republic	0	678	21	203	1,013	1,587	0	36	209	3,726
Jamaica	0	1,888	*834	1,335	2,204	5,203	0	301	291	11,213
Nicaragua	0	660	0	228	673	614	0	67	353	2,395
Panama, Canal Zone	0	0	0	0	0	0	0	0	0	0
Panama, Republic	0	3,100	1,884	2,687	5,581	12,234	0	1,878	884	28,188
Puerto Rico	0	30,687	1,302	2,048	6,898	15,627	0	14,666	6,233	78,712
Virgin Islands	0	*5,371	*293	*1,787	*9,548	*27,645	0	*12,940	*2,387	59,678
Total		53,615		11,588	36,256	82,480	0	31,423	12,411	229,893
South America:										
Argentina	381	32,134	1,874	8,463	34,248	47,815	1,398	12,491	9,192	145,341
Barbados	0	246	0	105	281	168	0	35	42	878
Bolivia	0	1,866	66	808	613	956	51	30	138	4,433
Brazil	0	53,991	4,429	9,197	[illegible]	54,867	64	6,837	7,556	172,422
Chile	225	9,953	0	2,734	4,631	7,473	0	2,534	*1,338	28,720
Colombia	629	14,402	1,083	4,232	6,568	15,633	467	5,721	2,224	49,249
Ecuador	0	2,584	435	1,864	1,527	2,329	4	28	189	7,727
Guyana	0	0	0	0	0	0	0	0	0	0
Netherlands Antilles	6,159	41,655	11,380	41,325	27,532	170,718	6,774	6,948	16,892	311,234
Paraguay	0	385	44	165	460	203	0	42	110	1,364
Peru	30	9,774	1,420	5,212	6,823	7,766	65	823	117	30,600
Surinam	0	0	0	0	0	0	0	0	0	0
Trinidad	2,999	22,160	15,161	17,490	17,114	88,271	1,472	2,353	5,190	154,077
Uruguay	0	2,333	159	1,474	2,315	4,971	2	507	349	11,951
Venezuela	278	23,084	23,773	29,394	55,250	257,702	3,583	43,519	9,226	422,744
Total		214,169		121,884	197,409	698,173	14,079	81,882	52,148	1,539,791
Western Europe:										
Austria	0	7,851	728	754	8,174	16,168	1,884	3,488	567	38,886
Belgium and Luxembourg	18	28,113	8,384	9,306	47,588	68,712	378	22,924	16,539	211,534
Denmark	0	11,279	608	1,523	19,172	28,114	0	3,707	4,753	68,668
Finland	0	8,747	560	645	14,801	19,091	0	4,305	4,324	51,913
France	506	104,772	22,742	23,092	[illegible]	157,844	7,208	63,644	38,185	671,484
Germany, West	0	99,396	10,281	10,920	[illegible]	173,384	7,196	144,234	33,732	723,777
Greece	0	4,420	2,624	3,345	10,698	10,643	128	2,787	1,731	33,670
Iceland	0	0	0	0	0	0	0	0	0	0
Ireland	0	4,344	616	626	4,692	6,307	0	910	750	17,614
Italy	1,622	107,184	13,144	38,698	148,373	328,437	3,674	88,953	67,617	782,917
Malta	0	0	0	0	0	0	0	0	0	0
Netherlands	1,682	38,315	14,104	22,552	101,364	142,178	314	48,438	32,394	385,139
Norway	0	4,312	993	1,772	11,420	16,353	167	2,883	1,938	38,845
Portugal	0	1,853	488	2,082	3,245	4,116	0	2,463	1,735	15,504
Spain (including Canary Islands)	71	28,093	6,675	9,754	48,245	93,841	1,391	19,394	10,682	220,730
Sweden	0	10,659	1,296	1,837	20,328	32,741	483	7,840	7,204	80,897
Switzerland	0	6,860	704	743	13,659	18,336	0	1,880	2,142	37,740
United Kingdom	334	87,296	25,414	45,207	145,309	254,945	8,411	84,589	44,054	671,834
Yugoslavia	0	8,528	482	1,093	12,854	13,187	629	2,060	1,148	39,487
Total		556,180		173,710	1,142,428	1,374,028	31,891	509,411	269,925	4,078,231
Middle East:										
Bahrain	0	8,037	13,752	14,854	17,101	35,651	0	7,670	4,063	87,376
Cyprus	0	0	0	0	0	0	0	0	0	0
Iran	6,471	28,407	13,428	33,110	29,831	78,842	560	14,792	7,065	190,427
Iraq	0	3,272	651	6,825	5,701	9,668	266	851	*1,234	*25,804
Israel*	0	6,279	0	5,460	8,248	12,870	0	3,588	2,536	39,001
Jordan	0	738	0	534	911	759	0	563	197	3,712
Kuwait	0	7,053	635	4,309	46,930	50,627	0	4,843	1,374	115,141
Lebanon	0	2,957	1,379	1,648	2,375	5,808	0	445	608	13,822
Neutral Zone	0	0	0	0	251	11,758	0	2,203	383	14,595
Oman	0	0	0	0	0	0	0	0	0	0
Qatar	0	63	0	33	50	80	0	0	21	247
Saudi Arabia	176	25,584	13,842	17,152	18,265	80,663	0	14,142	5,435	161,443
Southern Yemen 3/	0	2,420	4,878	7,012	5,006	29,394	0	311	1,861	47,003
Syria	0	*1,856	0	*1,568	*2,179	*3,679	0	*414	*253	9,861
Trucial States	0	0	0	0	0	0	0	0	0	0
Turkey	18	7,900	1,287	4,564	10,625	19,714	0	3,237	1,127	47,167
Total		94,896		95,080	147,483	337,552	826	53,063	27,465	735,794

See footnotes at end of table.

TABLE 1 - Output of refined products, 1969 1/ — Continued

(Thousands of barrels)

Country or area	Gasoline		Kerosine and jet fuel		Distillate fuel oil	Residual fuel oil	Lubricants (including grease)	Other 2/	Refinery fuel and loss	Total output of refined products
	Aviation (as reported)	Total (incl. motor and aviation)	Jet fuel (as reported)	Total (incl. kerosine and jet fuel)						
Africa:										
Algeria	0	4,313	0	1,620	5,877	2,943	1	1,243	342	16,339
Angola	0	524	375	433	734	2,324	0	144	320	4,479
Cameroon, Federal Republic of	0	0	0	0	0	0	0	0	0	0
Cape Verde Islands	0	0	0	0	0	0	0	0	0	0
Congo, Republic of the (Kinshasa)	0	884	573	573	1,180	1,898	0	9	354	4,898
Egypt	0	3,868	24	3,318	3,633	9,850	0	404	1,264	22,337
Ethiopia	0	585	200	219	1,011	1,365	0	69	439	3,688
Former Equatorial Africa 4/	0	0	0	0	0	0	0	0	0	0
Former West Africa 5/	0	2,160	847	1,267	2,538	3,484	0	202	498	10,149
Gabon	0	1,036	0	738	1,333	1,938	0	39	169	5,253
Ghana	0	1,353	0	474	1,613	2,303	0	37	300	6,082
Kenya	0	2,508	1,192	2,138	3,230	6,760	0	419	805	15,860
Liberia	0	383	76	167	639	638	0	4	203	2,034
Libya	0	762	0	364	861	1,160	0	0	166	3,313
Malagasy Republic	93	727	94	272	731	*1,552	47	69	*233	3,632
Morocco	0	2,669	269	900	3,493	3,047	0	601	344	11,054
Mozambique	0	1,214	0	0	1,634	2,349	0	271	758	6,226
Nigeria	0	0	0	0	0	0	0	0	0	0
Rhodesia	0	0	0	0	0	0	0	0	0	0
Sierra Leone	0	320	0	163	376	813	0	242	133	2,047
Somali Republic	0	0	0	0	0	0	0	0	0	0
Somaliland, French	0	0	0	0	0	0	0	0	0	0
South Africa, Republic of	0	17,265	584	1,698	13,177	13,992	662	2,208	4,667	53,669
Sudan	0	747	465	616	1,786	1,803	0	26	619	5,597
Tanzania	0	926	291	547	972	2,076	0	37	358	4,916
Tunisia	0	1,014	0	428	2,276	2,761	0	1,008	1,287	8,774
Uganda	0	0	0	0	0	0	0	0	0	0
Zambia	0	0	0	0	0	0	0	0	0	0
Total	93	43,258		15,935	47,094	63,059	710	7,032	13,259	190,347
Asiatic area:										
Afghanistan	0	0	0	0	0	0	0	0	0	0
Australia	219	58,940	6,764	8,474	31,831	38,913	2,258	10,181	15,320	165,917
Brunei	0	108	0	0	184	5	0	7	0	304
Burma	29	1,486	200	2,057	1,706	1,014	0	192	402	6,857
Ceylon	0	385	0	476	873	1,361	0	332	390	3,837
Fiji	0	0	0	0	0	0	0	0	0	0
Hong Kong	0	0	0	0	0	0	0	0	0	0
India	205	14,060	3,316	23,821	35,678	21,087	584	29,343	6,794	131,367
Indonesia	207	10,927	1,776	15,943	8,371	12,926	21	24,446	3,464	76,098
Japan	532	116,241	21,061	102,277	115,714	515,072	12,881	159,467	42,311	1,063,963
Korea, South	0	4,774	3,126	5,346	9,605	26,739	0	5,422	3,126	55,012
Laos	0	0	0	0	0	0	0	0	0	0
Malaysia	110	5,950	5,475	8,760	6,096	20,002	0	1,096	2,117	44,021
New Caledonia	0	0	0	0	0	0	0	0	0	0
New Zealand	0	9,472	0	0	4,824	4,458	0	1,349	1,453	21,556
Pakistan	318	2,868	2,911	7,560	7,492	11,014	524	2,698	1,990	34,146
Philippines	0	14,561	2,416	5,744	12,853	21,337	0	1,744	4,271	60,510
Singapore	0	8,554	11,387	15,224	11,675	8,374	355	20,584	2,457	67,323
Taiwan	300	3,764	3,735	3,843	5,496	14,880	576	2,409	1,805	32,773
Thailand	0	3,523	1,591	2,593	6,471	6,375	1	2,690	4,111	25,764
Vietnam, South, and Cambodia	0	292	110	293	1,059	657	0	511	219	3,031
Total		255,905		202,411	259,928	704,234	17,200	262,571	90,230	1,792,479
World total (excluding Sino-Soviet area)		3,443,314		1,089,931	2,825,372	3,592,528	133,113	1,370,609	717,308	13,172,175

* Estimates based on latest available data.
1/ Excludes liquefied petroleum gases sold directly for fuel and chemical uses from natural gasoline plants.
2/ Includes other finished products and unfinished oils requiring further processing, including topped crude.
3/ Formerly listed as Aden.
4/ Includes Central African Republic, Congo Republic, and Tchad.
5/ Includes Dahomey, Guinea, Ivory Coast, Mali, Mauritania, Niger, Senegal, Togo, and Upper Volta.

TABLE 2

Foreign Residual Fuel Oil Desulfurization Facilities, Yearend 1970
Capacities in Barrels Per Day

Country Company	Refinery Location	Year Completed	Capacity[1]	Process	Company	Comments
		Completed				
Japan						
Idemitsu Kosan	Chiba	1967	40,000	Direct	RCD-UOP	Lowers 4.0% S resid. to 1.0% S resid.
Fuji Sekiyu	Sodegaura	1968	23,000	Indirect	Isomax	For the most part, the capacities of these units reflect their ability to produce a desulfurized gas-oil with about 0.3 to 0.5% S content which is blended with a variety of vacuum resid. to meet the Japanese average of 1.7% S.
Toa Nenryo Kogyo	Wakayama	1968	25,000	do	ER & E	
Nihan Sekiyu Seisei	Negishi	1969	40,000	do	CRC Isomax	
Daikyo Sekiyu	Umaokoshi	1969	35,000	do	Gulfining	
Kyushu Sekiyu	Oita	1969	14,000	do	UOP Isomax	
Showa Sekiyu	Kawasaki	1969	14,000	do	Shell HDS	
Mitsubishi Sekiyu	Mizushima	1969	30,000	do	UOP Isomax	
Maruzen Sekiyu	Chiba	1969	35,000	do	Unicracking	
Seibu Sekiyu	Yamaguchi	1969	4,000	do	Shell HDS	
General Sekiyu Seisei	Sakai	1970	31,000	do	ER & E	
Koa Sekiyu Seisei	Marifu	1970	8,000	do	CRC Isomax	
Nihan Kogyo	Mizushima	1970	27,760	Direct	Gulf HDS	Lowers Feedstock from 4% S to 1% S resid.
Kashima Sekiyu	Kashima	1970	45,000	Direct	RCD-UOP Isomax	NA
Daikyo Sekiyu	Umaokoshi	1970	17,500	NA	NA	NA
Subtotal			389,260			

TABLE 2 (Cont'd)

Kuwait						
Kuwait National Oil Co.	Shwaiba	1968	28,000	Direct	H-Oil-Hydro Carb. Res.	Feed is heavy oils from vacuum unit. Output is a wide range of products. Resid. output is 11,810 b/d of 2% which can be mixed with heavy gas-oil from other units. Called all hydrogen refinery.
American Independent Oil Co.	Mena Abdulla	1969	35,000	Direct	Isomax	Lowers crude bottons (Resid.) of as high as 6.3% S to less than 1% S.
Subtotal			63,000			
Venezuela						
Creole Petroleum Corp.	Amuay	1970	143,000	Indirect	ERE	Two units each 71,500 b/d. Not sufficient VGO to operate at capacity. In 1970 was operating at 80%. This will continue until other units are completed. Present output is 0.2% S gas-oil which is blended with 3.1% S resid from the vacuum gas-oil unit. Resid output could (in 1970) reach 160,000 b/d of 1% S or 100,000 b/d or 1% S and 50,000 b/d of 0.3% S.
Cie. Shell deVenezuela, Ltd.	Cardon	1969	35,000	Indirect	Shell-HDS	Can remove up to 80% of the sulfur in the VGO. Feed is VGO, atmosphere distillate or furfural extr. with a S content of 2.1 by weight. Can produce desulfurized distillate of 0.3% S @ 35,000 b/d.
Subtotal			178,000			

TABLE 2 (Cont'd)

Netherlands West Indies Shell Curacao, N. V.	Curacao	1967	30,000	Indirect	Shell-HDS	Feed is VGO of about 2.0% S produces 30,000 b/d of 0.3%S gas-oil.
Virgin Islands Hess Oil Co.	St. Croix	1969	60,000	Indirect	NA	Feed is vacuum gas-oil VGO of 1.2% S. Output is 0.1% S gas-oil which is mixed with vacuum resid or atmospheric resid. Blending schedules are not available.
Total Completed			720,260			

TABLE 2 (Cont'd)

Under Construction

Trinidad						
Texaco Trinidad, Inc.	Pointe-a-Pierre	1972	77,000	Indirect	NA	NA
Netherlands West Indies						
Iago Oil and Transport Co.	Aruba	1971	80,000	Indirect	NA	Product to be charged is 2.0% S VGO. Resid output is reported at 75,000 b/d or 1.0% S and 13,000 b/d or 0.3% S.
Bahamas						
Bahama Oil Refining Co.	Freeport	1972	40,000	Indirect	NA	NA
Mexico						
Petroleos Mexicanos (Pemex)	Salamanca	1972	18,500	Direct	HRI	NA
Japan						
Idemitzu Kosan	Himeji	1971	40,000	Direct	UOP	NA
Kansai Sekiyu	Sakai	1971	20,000	Indirect	NA	NA
Koa Sekiyu	Osaka	1971	12,000	Indirect	NA	NA
Toa Nenryo Kogyo	Kawasaki	1971	35,000	Indirect	NA	NA
Kyokuto Sekiyu Kogyo	Chiba	1972	40,000	Direct	NA	NA
Subtotal			147,000			
Total Under Construction			362,500			

1/ For the most part, capacities are believed to be the throughput capacity of the process unit.

TABLE 3 - Supply of and demand for crude petroleum and refined products, 1969

(Thousands of barrels)

Country or area	Crude petroleum					Refined products			
	Production	Imports crude and unfinished oils	Exports and reexports	Stock change, other demand and loss	Total refinery throughput 1/ or output 2/	Imports	Exports and reexports	Domestic demand (including bunkers) 3/	Bunkers - all flags 4/
North America:									
Bermuda	0	0	0	0	0	1,539	0	2,629	1,090
Canada	410,814	193,125	197,341	0	433,961	73,417	4,121	5/ 517,555	-
Mexico	168,379	1	0	+6,676	168,925	17,272	14,823	5/ 185,129	-
United States	6/ 3,371,751	514,114	1,436	+4,824	4,182,752	641,437	83,449	5/ 5,139,930	86,331
Total	3,950,944	707,240	198,777	+9,500	4,785,638	733,665	102,393	5,845,243	87,421
Central America and Caribbean:									
Costa Rica	0	2,413	0	+ 17	2,396	578	117	2,857	-
Cuba	*821	41,610	0	+6,471	*37,960	*5,667	0	*43,627	-
Dominican Republic	0	0	0	0	0	5,719	0	5,719	2,472
El Salvador	0	2,445	0	+ 47	2,398	156	722	1,830	-
Guatemala	0	5,548	0	+ 19	5,529	419	0	5/ 5,860	394
Haiti	0	0	0	0	0	883	0	883	-
Honduras, British	0	0	0	0	0	373	0	373	-
Honduras, Republic	0	3,903	0	+ 177	3,726	858	1,907	2,677	-
Jamaica	0	11,287	0	+ 75	11,212	2,008	833	5/ 10,762	1,939
Nicaragua	0	2,359	0	+ 38	2,595	557	0	3,152	-
Panama, Canal Zone	0	0	0	0	0	28,228	983	27,245	26,129
Panama, Republic	0	25,785	0	- 404	26,189	276	7	26,458	-
Puerto Rico	0	78,632	0	+ 420	78,212	5,427	29,592	54,047	498
Virgin Islands	0	61,365	0	+1,687	59,678	1,791	48,161	13,308	-
Total	821	235,347	0	+8,547	229,895	52,934	82,322	198,798	31,432
South America:									
Argentina	130,086	16,757	259	+1,411	145,143	14,730	1,542	5/ 145,143	2,625
Barbados	0	574	0	- 179	878	1,774	73	2,579	1,602
Bolivia	14,759	0	10,089	+ 238	4,433	140	0	4,573	-
Brazil	63,969	110,203	0	+1,751	172,421	8,724	1,509	5/ 174,712	-
Chile	13,350	16,044	0	+ 674	28,720	3,289	223	31,786	585
Colombia	76,776	0	29,853	+ 338	49,249	729	11,767	5/ 34,231	2,602
Ecuador	1,567	5,322	0	- 838	7,727	340	0	8,067	-
Guyana	0	0	0	0	0	5,213	0	5,213	-
Netherlands Antilles	0	285,450	0	+6,983	311,234	28,907	254,648	5/ 32,149	*12,707
Paraguay	0	1,364	0	0	1,364	190	0	1,554	-
Peru	26,330	5,512	1,644	+ 914	30,800	3,474	4	5/ 31,872	228
Surinam	0	0	0	0	0	*3,339	0	*3,339	-
Trinidad	57,418	103,762	6,230	+ 873	134,077	1,661	137,950	5/ 18,301	9,927
Uruguay	0	11,685	0	- 266	11,951	911	0	12,862	422
Venezuela	1,311,832	0	7/ 903,728	8/ -1,020	421,794	161	341,208	5/ 70,303	18,910
Total	1,696,087	556,673	951,812	+10,919	1,339,791	73,582	748,924	576,684	49,588
Western Europe:									
Austria	19,236	18,219	0	- 1,431	38,886	22,084	1,107	58,863	-
Belgium and Luxembourg	0	210,551	240	- 1,248	211,559	49,860	75,730	5/ 187,644	19,358
Denmark	0	68,841	67	+ 2,276	66,498	65,974	11,506	5/ 120,516	4,101
Finland	0	53,657	0	+ 1,754	51,903	22,470	3,471	5/ 70,191	280
France	18,207	648,981	0	- 5,276	672,464	40,264	89,418	5/ 607,351	24,158
Germany, West	56,986	669,217	874	+ 5,676	722,777	189,108	54,656	5/ 850,881	27,779
Greece	0	33,752	0	+ 82	33,670	13,594	1,803	5/ 44,783	4,191
Iceland	0	0	0	0	0	3,742	0	3,742	-
Ireland	0	16,206	0	0	17,619	14,886	4,829	5/ 25,687	833
Italy	9,309	765,342	0	- 8,266	782,917	26,540	206,293	5/ 616,886	58,175
Malta	0	0	0	0	0	2,018	0	2,018	-
Netherlands	13,792	365,935	3,374	+ 2,625	385,159	46,426	183,499	5/ 253,800	60,581
Norway	0	37,758	316	- 1,403	38,845	25,956	11,889	5/ 54,146	3,064
Portugal	0	16,672	0	+ 1,168	15,504	14,715	1,406	5/ 29,058	4,192
Spain (including Canary Islands)	1,386	214,682	0	+ 5,861	210,550	8,512	40,074	178,988	14,148
Sweden	0	75,414	0	0	80,897	137,600	11,802	5/ 196,034	7,991
Switzerland	0	37,715	0	+ 69	37,740	47,499	1,862	5/ 84,502	-
United Kingdom	562	9/ 699,663	3,224	+25,165	671,836	160,455	103,980	5/ 723,954	37,837
Yugoslavia	19,991	23,780	1,755	+ 2,609	39,407	5,605	1,817	43,195	-
Total	139,369	3,956,385	9,850	+29,662	4,078,231	897,306	807,342	4,153,039	266,678
Middle East:									
Bahrain	27,774	58,230	0	+ 17	87,376	1,773	76,776	5/ 12,871	6,519
Cyprus	0	0	0	0	0	3,723	0	3,723	10
Iran	1,232,155	0	1,039,308	+ 2,220	190,627	112	80,216	102,523	30,920
Iraq	555,241	0	527,571	+ 1,866	*25,804	1,869	1,772	25,701	571
Israel	10/ 18,042	*40,535	*16,750	+ 2,826	*39,001	*3,712	*9,619	5/ 32,905	-
Jordan	0	3,712	0	0	3,712	389	0	4,001	-
Kuwait	940,041	12,940	835,575	+ 2,265	115,141	198	78,723	5/ 36,251	30,549
Lebanon	0	14,062	0	+ 384	13,922	714	3,007	11,629	3,180
Neutral Zone	163,149	0	149,987	- 1,333	14,495	11/	9,053	5,442	3,007
Oman	119,710	0	119,710	0	0	*3,342	0	*3,342	-
Qatar	129,746	0	128,845	+ 654	247	632	0	879	-
Saudi Arabia	1,092,322	0	938,547	- 7,668	161,443	553	111,132	5/ 50,150	34,994
Southern Yemen 12/	0	47,188	0	+ 165	47,003	28	38,[illegible]	8,803	3,388
Syria	16,771	9,861	16,771	0	9,861	*3,697	36	13,502	-
Trucial States	222,598	0	217,723	+ 4,875	0	705	0	705	-
Turkey	25,774	21,931	0	+ 543	47,162	5,509	707	5/ 49,154	548
Total	4,543,323	208,419	3,990,787	+ 6,814	755,794	26,676	417,287	361,581	113,586

See footnotes at end of table

TABLE 3 - Supply of and demand for crude petroleum and refined products, 1969 -- Continued

(Thousands of barrels)

Country or area	Crude petroleum					Refined products			
	Production	Imports crude and unfinished oils	Exports and reexports	Stock change, other demand and loss	Total refinery throughput 1/ or output 2/	Imports	Exports and reexports	Domestic demand (including bunkers) 3/	Bunkers - all flags 4/
Africa:									
Algeria	345,436	0	327,015	+ 2,082	16,339	1,321	3,485	5/ 15,939	-
Angola	17,456	0	10,840	+ 2,137	4,479	1,511	1,674	4,316	991
Cameroon, Federal Republic of	0	0	0	0	0	1,974	0	1,974	405
Cape Verde Islands	0	0	0	0	0	3,639	0	3,639	-
Congo, Republic of the (Kinshasa)	0	4,895	0	- 3	4,898	385	1,785	3,498	-
Egypt	89,601	6,868	70,912	+ 3,220	22,337	11,529	2,180	31,686	-
Ethiopia	0	3,662	0	- 26	3,688	453	810	3,331	-
Former Equatorial Africa 13/	173	0	*173	0	0	1,295	0	1,295	-
Former West Africa 14/	0	10,311	0	+ 162	10,149	8,895	1,378	17,666	7,302
Gabon	36,421	0	31,819	- 651	5,253	76	0	5,329	-
Ghana	0	5,462	0	- 620	6,082	764	1,820	5,026	-
Kenya	0	15,204	0	- 656	15,860	1,317	5,972	5/ 10,170	4,173
Liberia	0	2,221	0	+ 221	2,034	184	99	5/ 1,988	131
Libya	1,134,452	0	1,120,630	+10,309	3,313	6,113	528	8,898	-
Malagasy Republic	0	3,632	0	0	3,632	435	1,414	2,653	213
Morocco	438	10,588	0	- 28	11,054	1,134	126	12,062	-
Mozambique	0	6,226	0	0	6,226	791	2,575	4,442	721
Nigeria	197,204	0	198,806	- 1,602	0	9,930	22	9,908	13
Rhodesia	0	0	0	0	0	-	0	-	-
Sierra Leone	0	1,939	0	0	2,047	490	304	2,233	-
Somali, Republic	0	0	0	0	0	419	0	419	*7
Somaliland, French	0	0	0	0	0	*4,794	0	4,794	*2,763
South Africa, Republic of	0	37,348	0	+ 7,655	33,669	26,266	13,421	66,514	*10,923
Sudan	0	6,008	0	+ 411	5,597	6,010	751	10,856	288
Tanzania	0	4,662	0	- 254	4,916	2,480	3,942	5/ 3,995	72
Tunisia	27,942	3,459	22,082	+ 343	8,774	362	1,129	8,007	642
Uganda	0	0	0	0	0	2,833	33	5/ 2,331	-
Zambia	0	0	0	0	0	3,335	0	3,335	-
Total	1,849,123	142,485	1,782,277	+23,102	190,347	98,735	43,448	246,304	28,664
Asiatic area:									
Afghanistan	0	0	0	0	0	*376	0	376	-
Australia	15,805	143,105	0	- 124	165,917	15,973	3,574	5/ 178,959	15,409
Brunei	45,624	0	46,936	- 1,616	304	37	0	341	-
Burma	6,433	731	0	+ 307	6,857	162	79	6,940	-
Ceylon	0	4,381	0	+ 344	3,837	10,907	4	14,740	3,877
Fiji	0	0	0	0	0	1,966	122	1,844	766
Hong Kong	0	0	0	0	0	25,421	563	24,858	4,964
India	51,724	81,979	0	+ 2,336	131,367	7,814	6,135	5/ 126,294	1,930
Indonesia	271,001	217	191,124	+ 3,996	76,098	3,074	34,058	5/ 41,088	929
Japan	5,538	15/1,049,647	3	+14,487	1,063,963	128,237	85,727	5/ 1,186,173	104,760
Korea, South	0	55,300	36	+ 252	55,012	1,120	776	5/ 54,010	-
Laos	0	0	0	0	0	872	0	872	-
Malaysia	3,278	41,146	0	+ 403	44,021	5,792	22,513	27,300	-
New Caledonia	0	0	0	0	0	2,037	0	2,037	-
New Zealand	3	21,996	0	+ 440	21,556	5,311	735	26,132	4,027
Pakistan	3,460	31,323	0	+ 637	34,146	1,957	3,664	5/ 34,074	3,316
Philippines	0	60,789	0	+ 79	60,510	1,218	3,442	58,286	4,290
Singapore	0	67,672	0	+ 464	67,323	63,829	60,587	70,565	27,636
Taiwan	581	31,731	0	+ 1,539	32,773	5,183	2,051	5/ 34,599	2,963
Thailand	16	25,450	0	- 30	25,764	11,707	548	36,923	565
Vietnam, South, and Cambodia 16/	0	3,350	0	+ 319	3,031	60,449	767	62,713	-
Total	403,463	1,619,617	238,099	+24,033	1,792,479	353,442	227,345	1,987,104	175,502
World total (excluding Sino-Soviet area)	12,383,130	7,426,166	7,171,602	+110,577	13,172,175	2,236,346	2,429,061	13,368,753	752,871
Sino-Soviet area (excluding Cuba) *	2,638,900	17/ 212,150	17/ 428,055	+ 91,505	2,331,490	98,725	201,840	2,228,375	-
World total	15,222,030	7,638,316	7,599,657	+202,082	15,503,665	2,335,071	2,630,901	15,597,128	752,871

* Estimates based on latest available data.

1/ Total input includes crude runs to stills plus runs of unfinished oils, topped crude and natural gas liquids blended at refineries.

2/ Total output includes refined output and refinery fuel and loss; excludes liquefied petroleum gases sold directly for fuel and chemical uses from natural gasoline plants.

3/ Unless otherwise specified data represent apparent domestic demand, which includes inland demand, refinery fuel and loss, and bunkering. Apparent domestic demand is derived from the components of refined product output, plus imports, minus exports, with no allowance for change in stocks.

4/ Totals include listed data only.

5/ Domestic demand as reported, including refinery fuel and loss, stock changes and bunkering; also includes, where available, liquefied petroleum gases sold directly for fuel and chemical uses from natural gasoline plants.

6/ Includes lease condensate.

7/ Estimated 12,670,000 barrels of finished products blended with crude for further processing.

8/ Ministry of Mines and Hydrocarbon.

9/ Includes an appreciable quantity of blended residual feedstocks.

10/ Includes estimated occupied Sinai production.

11/ Imports come into Kuwait.

12/ Formerly listed as Aden.

13/ Includes Central African Republic, Congo Republic, and Tchad.

14/ Includes Dahomey, Guinea, Ivory Coast, Mali, Mauritania, Niger, Senegal, Togo, and Upper Volta.

15/ Includes 36,663 barrels for non-refining uses.

16/ Includes both military and civilian.

17/ Includes trade among Bloc countries.

TABLE 4. - Exports and reexports of refined products, 1969

(Thousands of barrels)

Country or area	Gasoline		Kerosine and jet fuel		Distillate fuel oil	Residual fuel oil	Lubricants (including grease)	Other 1/	Total exports and reexports of refined products	Bunkers - all flags 2/	
	Aviation (as reported)	Total (incl. motor and aviation)	Jet fuel (as reported)	Total (incl. kerosine and jet fuel)						Distillate fuel oil	Residual fuel oil
North America:											
Bermuda	0	0	0	0	0	0	0	0	0	3/ 864	226
Canada	6	707	75	163	2,060	432	2	757	4,121	-	-
Mexico	0	0	0	0	0	5,805	0	9,018	14,823	-	-
United States	1,746	2,449	1,730	1,885	1,123	16,891	16,396	44,705	83,449	3/ 44,071	42,260
Total		3,156		2,048	3,183	23,128	16,398	54,480	102,393	44,935	42,486
Central America and Caribbean:											
Costa Rica	0	0	0	0	0	117	0	0	117	-	-
Cuba	0	0	0	0	0	0	0	0	0	-	-
Dominican Republic	0	0	0	0	0	0	0	0	0	0	2,472
El Salvador	-	128	0	0	471	0	36	87	722	-	-
Guatemala	0	0	0	0	0	0	0	0	0	3/ 265	129
Haiti	0	0	0	0	0	0	0	0	0	-	-
Honduras, British	0	0	0	0	0	0	0	0	0	-	-
Honduras, Republic	0	299	0	0	324	1,284	0	0	1,907	-	-
Jamaica	0	33	0	50	388	246	116	0	833	3/ 1,150	789
Nicaragua	0	0	0	0	0	0	0	0	0	-	-
Panama, Canal Zone	76	194	0	17	30	718	0	24	983	5,268	20,861
Panama, Republic	0	7	0	0	0	0	0	0	7	-	-
Puerto Rico	0	20,828	112	112	6,986	0	0	1,666	29,592	53	445
Virgin Islands	0	825	130	992	9,031	24,898	0	12,415	48,161	-	-
Total		22,314		1,171	17,230	27,263	152	14,192	82,322	6,736	24,696
South America:											
Argentina	0	0	4	7	13	639	35	848	1,542	3/ 824	1,001
Barbados	0	68	0	0	3	0	0	0	73	3/ 1,602	-
Bolivia	0	0	0	0	0	0	0	0	0	-	-
Brazil	0	0	0	736	767	6	0	0	1,509	-	-
Chile	0	0	0	0	0	0	0	223	223	3/ 505	60
Colombia	0	0	0	0	1,399	9,893	0	475	11,767	3/ 1,723	879
Ecuador	0	0	0	0	0	0	0	0	0	-	-
Guyana	0	0	0	0	0	0	0	0	0	-	-
Netherlands Antilles	6,159	33,844	19,941	37,751	22,764	147,681	6,013	6,595	254,648	*1,356	*11,351
Paraguay	0	0	0	0	0	0	0	0	0	-	-
Peru	0	0	0	0	0	0	0	4	4	91	137
Surinam	0	0	0	0	0	0	0	0	0	-	-
Trinidad	2,018	20,943	14,625	17,246	15,330	80,810	1,394	2,227	137,950	3/ 1,342	8,585
Uruguay	0	0	0	0	0	0	0	0	0	3/ 71	351
Venezuela	0	509	21,684	21,780	32,466	252,335	2,915	31,203	341,208	3/ 2,257	16,653
Total		55,364		77,520	72,744	491,364	10,357	41,575	748,924	9,771	39,817
Western Europe:											
Austria	0	26	106	106	2	0	894	79	1,107	-	-
Belgium and Luxembourg	18	12,224	6,032	7,055	27,393	16,605	1,316	11,137	75,730	3/ 3,321	16,037
Denmark	0	2,669	16	148	3,074	4,342	126	1,147	11,506	1,164	2,937
Finland	0	2,362	0	0	709	293	7	100	3,471	67	213
France	7	10,676	3,177	3,195	21,680	28,495	191	25,181	89,418	3/ 4,459	19,699
Germany, West	936	9,340	244	353	8,222	16,277	2,483	20,181	56,856	3/ 6,827	20,952
Greece	0	111	952	952	627	33	0	80	1,803	1,753	2,438
Iceland	0	0	0	0	0	0	0	0	0	-	-
Ireland	89	157	1,686	1,686	612	2,065	0	309	4,829	194	639
Italy	974	26,659	8,900	16,256	74,776	58,856	1,724	28,022	206,293	3/ 13,106	45,069
Malta	0	0	0	0	0	0	0	0	0	-	-
Netherlands	2,697	17,496	9,552	11,978	61,127	54,399	3,157	35,342	183,499	3/ 15,675	44,906
Norway	0	2,527	0	0	2,552	6,501	90	219	11,889	3/ 1,029	2,035
Portugal	98	166	32	931	104	107	98	0	1,406	3/ 1,558	2,624
Spain (incl. Canary Islands)	30	5,043	2,464	2,721	7,941	20,433	94	3,842	40,074	3/ 3,465	10,683
Sweden	0	2,423	520	760	1,992	3,883	28	2,716	11,802	2,596	5,395
Switzerland	0	240	0	0	11	1,445	15	131	1,862	-	-
United Kingdom	608	7,600	5,645	9,086	40,750	39,045	4,732	2,767	103,980	5,820	32,017
Yugoslavia	3	829	192	192	470	161	1	164	1,817	-	-
Total		100,548		55,419	252,042	252,940	14,956	131,437	807,342	61,034	205,644
Middle East:											
Bahrain	0	7,784	13,681	14,713	15,915	29,750	3	8,609	76,774	3/ 772	5,747
Cyprus	0	0	0	0	0	0	0	0	0	7	3
Iran	6,331	22,398	9,540	15,242	11,898	34,753	4	3,921	88,216	816	30,004
Iraq	0	16	23	174	150	1,396	4	32	1,772	254	317
Israel*	0	2,420	0	2,019	2,763	1,555	0	862	9,619	-	-
Jordan	0	0	0	0	0	0	0	0	0	-	-
Kuwait	0	4,232	0	3,157	36,255	29,110	0	5,969	78,723	3/ 9,382	21,167
Lebanon	0	41	184	184	144	2,612	2	24	3,007	3/ 3,175	5
Neutral Zone	0	0	0	0	0	6,962	0	2,091	9,053	56	2,951
Oman	-	-	-	-	-	-	-	-	-	-	-
Qatar	0	0	0	0	0	0	0	0	0	-	-
Saudi Arabia	0	21,522	14,100	15,466	13,541	47,464	0	13,139	111,132	619	34,375
Southern Yemen 4/	0	1,625	4,646	6,194	4,397	26,011	1	0	38,228	-	3,388
Syria	0	34	0	0	0	0	0	22	56	-	-
Trucial States	0	0	0	0	0	0	0	0	0	-	-
Turkey	0	0	0	0	0	707	0	0	707	75	473
Total		60,072		57,149	85,063	180,320	14	34,669	417,287	15,156	98,430

See footnotes at end of table.

TABLE 4. - Exports and reexports of refined products, 1969 -- Continued

(Thousands of barrels)

Country or area	Gasoline		Kerosine and jet fuel		Distillate fuel oil	Residual fuel oil	Lubricants (including grease)	Other 1/	Total exports and reexports of refined products	Bunkers - all flags 2/	
	Aviation (as reported)	Total (incl. motor and aviation)	Jet fuel (as reported)	Total (incl. kerosine and jet fuel)						Distillate fuel oil	Residual fuel oil
Africa:											
Algeria	0	1,178	0	294	765	1,206	0	42	3,485	-	-
Angola	0	4	0	0	0	1,670	0	0	1,674	-	991
Cameroon, Federal Republic of	0	0	0	0	0	0	0	0	0	306	99
Cape Verde Islands	0	0	0	0	0	0	0	0	0	-	-
Congo, Republic of the (Kinshasa)	0	43	0	0	59	1,683	0	0	1,785	-	-
Egypt	0	0	0	273	54	649	0	1,204	2,180	-	-
Ethiopia	0	2	0	0	0	805	0	3	810	-	-
Former Equatorial Africa 3/	0	0	0	0	0	0	0	0	0	-	-
Former West Africa 6/	0	31	162	163	17	1,042	0	125	1,378	1,615	5,687
Gabon	0	0	0	0	0	0	0	0	0	-	-
Ghana	0	0	0	0	0	1,820	0	0	1,820	-	-
Kenya	29	1,412	582	1,087	1,337	1,736	161	239	5,972	3/ 1,681	2,492
Liberia	0	0	0	10	43	43	0	1	99	30	121
Libya	0	5	0	21	502	0	0	0	528	-	-
Malagasy Republic	0	286	0	113	155	860	0	0	1,414	47	166
Morocco	0	24	0	2	61	39	0	0	128	-	-
Mozambique	0	542	0	0	471	1,456	1	105	2,575	65	656
Nigeria	0	1	0	0	0	21	0	?	22	-	13
Rhodesia	0	0	0	0	0	0	0	0	0	-	-
Sierra Leone	0	89	0	0	178	37	0	0	304	-	-
Somali Republic	0	0	0	0	0	0	0	0	0	-	7
Somaliland, French	0	0	0	0	0	0	0	0	0	*843	*2,120
South Africa, Republic of	0	185	0	525	1,550	10,559	323	279	13,421	*1,452	*9,471
Sudan	0	0	0	0	1	535	214	1	751	3/ 169	119
Tanzania	42	1,193	144	258	1,700	788	2	'	3,942	3/ 60	12
Tunisia	0	628	0	148	313	21	4	15	1,129	3/ 589	53
Uganda	19	20	0	4	8	0	1	0	33	-	-
Zambia	0	0	0	0	0	0	0	0	0	-	5
Total		5,643		2,898	7,216	24,970	706	2,015	43,448	6,657	22,007
Asiatic area:											
Afghanistan	0	0	0	0	0	0	0	0	0	-	-
Australia	4	1,286	461	554	1,732	1,194	534	274	5,574	2,403	13,006
Brunei	0	0	0	0	0	0	0	0	0	-	-
Burma	0	0	0	0	0	0	0	79	79	-	-
Ceylon	0	3	0	0	1	0	0	0	4	-	3,877
Fiji	4	34	6	21	59	3	2	3	122	3/ 661	105
Hong Kong	0	28	0	46	278	10	131	70	563	1,479	3,485
India	0	1,003	0	0	500	53	0	4,579	6,135	175	1,755
Indonesia	0	1,609	1,445	1,445	1,158	6,118	0	23,728	34,058	761	188
Japan	-	658	15,307	20,250	6,914	54,905	1,521	1,479	85,727	15,123	89,657
Korea, South	0	33	0	54	113	142	0	434	776	-	-
Laos	0	0	0	0	0	0	0	0	0	-	-
Malaysia	11	1,467	5,774	7,850	2,154	11,010	3	29	22,513	-	-
New Caledonia	0	0	0	0	0	0	0	0	0	-	-
New Zealand	0	0	0	0	9	717	1	8	735	3/ 2,718	1,309
Pakistan	0	73	0	0	90	2,416	0	1,085	3,664	3/ 1,541	1,775
Philippines	0	0	0	0	94	2,307	0	1,041	3,442	3/ 2,521	1,769
Singapore	3,719	13,652	18,792	22,933	17,323	4,542	1,010	1,127	60,587	3/ 714	26,972
Taiwan	1	3	120	120	923	106	356	541	2,051	2,214	749
Thailand	0	183	2	6	78	265	16	2	548	3/ 565	-
Vietnam, South, and Cambodia	0	0	0	0	0	256	0	511	767	-	-
Total		20,032		53,279	31,426	84,044	3,574	34,990	227,345	30,875	144,627
World total (excluding Sino-Soviet area)		267,129		249,484	468,904	1,084,029	46,157	313,358	2,429,061	175,184	577,707

* Estimates based on latest available data.
1/ Includes other finished products and unfinished oils requiring further processing, including topped crude.
2/ Totals include listed data only.
3/ Includes other such as aviation gasoline, commercial jet fuel and lubricants.
4/ Formerly listed as Aden.
5/ Includes Central African Republic, Congo Republic, and Tchad.
6/ Includes Dahomey, Guinea, Ivory Coast, Mali, Mauritania, Niger, Senegal, Togo, and Upper Volta.

TABLE 5 - Imports of refined products, 1969

(Thousands of barrels)

Country or area	Gasoline		Kerosine and jet fuel		Distillate fuel oil	Residual fuel oil	Lubricants (including grease)	Other 1/	Total imports of refined products
	Aviation (as reported)	Total (incl. motor and aviation)	Jet fuel (as reported)	Total (incl. kerosine and jet fuel)					
North America:									
Bermuda	0	225	509	734	185	329	8	38	1,539
Canada	196	6,214	4,731	7,721	19,454	33,242	1,722	5,064	73,417
Mexico	48	2,982	122	205	1,726	2,602	609	9,148	17,272
United States	0	22,709	45,539	46,304	50,883	461,611	163	39,567	641,437
Total		32,130		55,184	72,248	497,784	2,502	73,817	733,665
Central America and Caribbean:									
Costa Rica	57	164	0	60	177	0	77	100	578
Cuba*	125	459	0	482	1,757	2,516	312	141	5,667
Dominican Republic	40	1,653	253	380	719	2,472	137	338	5,719
El Salvador	44	62	--	--	2	0	46	44	154
Guatemala	104	149	8	8	--	--	65	197	419
Haiti	7	205	44	63	388	202	15	10	883
Honduras, British	34	134	0	60	124	35	19	1	373
Honduras, Republic	42	270	0	61	439	0	45	43	858
Jamaica	49	54	152	177	313	1,325	128	11	2,008
Nicaragua	94	224	3	70	209	0	40	14	557
Panama, Canal Zone	124	522	0	25	5,453	21,789	0	439	28,228
Panama, Republic	0	0	0	0	49	92	47	88	276
Puerto Rico	0	7	3,106	3,106	25	1,122	0	1,167	5,427
Virgin Islands	192	341	281	288	808	137	47	170	1,791
Total		4,244		4,780	10,463	29,690	978	2,783	52,938
South America:									
Argentina	--	--	0	0	5,505	3,731	1,027	4,467	14,730
Barbados	24	55	112	367	540	784	14	14	1,774
Bolivia	105	105	0	0	0	0	5	30	140
Brazil	616	2,000	88	88	0	0	1,981	4,655	8,724
Chile	192	192	801	801	563	1,326	334	73	3,289
Colombia	2	463	22	22	15	0	122	107	729
Ecuador	134	134	0	0	0	0	75	131	340
Guyana	24	380	14	200	773	3,814	17	29	5,213
Netherlands Antilles	265	2,452	314	342	1,531	15,645	117	8,840	28,907
Paraguay	14	14	0	0	4	102	34	36	190
Peru	248	248	0	0	0	2,031	265	930	3,474
Surinam	30	202	18	64	625	2,353	29	66	3,339
Trinidad	2	7	1	747	1	820	43	43	1,661
Uruguay	34	34	0	75	101	682	0	19	911
Venezuela	0	0	0	0	0	0	15	146	161
Total		6,266		2,706	9,658	31,288	4,078	19,586	73,582
Western Europe:									
Austria	0	6,778	1	1	770	12,158	423	1,954	22,084
Belgium and Luxembourg	169	4,513	416	583	17,201	19,399	2,101	6,063	49,860
Denmark	267	5,002	3,512	4,442	26,759	26,347	609	2,815	65,974
Finland	130	172	41	116	14,007	6,009	551	1,615	22,470
France	367	3,827	27	169	22,883	4,423	17	6,965	40,264
Germany, West	1,500	17,519	3,280	3,483	109,923	21,288	9,341	27,554	189,108
Greece	312	831	2,016	2,016	3,081	6,993	308	365	13,594
Iceland	21	451	438	452	2,154	618	34	33	3,742
Ireland	45	589	1,736	2,286	918	7,706	286	3,121	14,886
Italy	107	107	0	574	576	17,935	843	6,305	26,340
Malta	0	237	286	455	312	983	1	30	2,018
Netherlands	997	5,366	856	3,328	16,994	12,274	1,141	7,323	46,426
Norway	199	5,005	532	1,938	8,841	7,312	424	2,436	25,956
Portugal	205	1,990	2,336	2,336	3,230	4,069	462	2,628	14,713
Spain (including Canary Islands)	399	414	2[illegible]	148	163	486	343	6,760	8,312
Sweden	0	15,020	3,064	4,761	49,661	56,523	322	11,313	137,600
Switzerland	0	11,490	0	419	29,225	2,549	598	3,218	47,499
United Kingdom	1,235	34,886	4,555	9,057	21,115	41,434	3,633	30,308	160,455
Yugoslavia	151	209	0	39	1,956	2,534	364	513	5,605
Total		116,406		36,903	329,769	251,028	21,803	141,499	897,308
Middle East:									
Bahrain	125	1,588	0	174	0	0	11	0	1,773
Cyprus	21	825	0	292	982	1,569	43	12	3,723
Iran	0	0	0	0	2	0	34	36	112
Iraq	0	0	0	13	384	1,269	1	2	1,669
Israel*	140	140	0	0	0	3,330	136	106	3,732
Jordan	0	33	0	200	0	0	33	1	289
Kuwait	8	8	0	4	0	0	164	20	198
Lebanon	14	214	5	5	4	0	110	381	714
Neutral Zone 2/	--	--	--	--	--	--	--	--	--
Oman*	57	314	124	211	131	2,493	0	193	3,342
Qatar	0	302	0	23	172	0	11	124	632
Saudi Arabia	0	0	0	223	5	176	140	9	553
Southern Yemen 3/	0	0	0	0	0	0	28	0	28
Syria*	22	213	120	167	1,936	923	124	332	3,697
Trucial States	12	275	0	63	367	0	0	0	705
Turkey	0	0	406	966	2,773	131	713	924	5,509
Total		3,914		2,343	6,758	9,891	1,610	2,160	26,676

See footnote at end of Table.

TABLE 5 - Imports of refined products, 1969--Continued

(Thousands of barrels)

Country or area	Gasoline		Kerosine and jet fuel		Distillate fuel oil	Residual fuel oil	Lubricants (including grease)	Other 1/	Total imports of refined products
	Aviation (as reported)	Total (incl. motor and aviation)	Jet fuel (as reported)	Total (incl. kerosine and jet fuel)					
Africa:									
Algeria	70	156	0	0	0	0	217	948	1,321
Angola	0	74	0	86	1,237	0	117	0	1,311
Cameroon, Federal Republic of	80	736	390	434	516	171	49	68	1,924
Cape Verde Islands	0	17	75	99	327	3,184	2	10	3,639
Congo, Republic of the (Kinshasa)	0	0	232	232	123	0	30	0	385
Egypt	0	17	92	2,169	2,963	4,933	251	1,096	11,329
Ethiopia	67	87	163	176	179	0	11	0	453
Former Equatorial Africa 4/	64	407	98	199	457	87	93	92	1,290
Former West Africa 5/	24	369	311	365	2,179	5,790	77	115	8,895
Gabon	0	50	0	4	8	0	14	0	76
Ghana	16	16	327	327	0	0	111	310	764
Kenya	77	172	308	643	266	1	209	26	1,317
Liberia	3	3	16	16	30	133	2	0	184
Libya	31	1,794	119	119	2,262	296	190	1,472	6,113
Malagasy Republic	57	124	1	4	115	1	66	123	435
Morocco	48	61	0	315	97	100	181	373	1,134
Mozambique	0	181	0	129	0	613	68	0	791
Nigeria	110	3,002	781	1,841	2,428	2,262	238	139	9,930
Rhodesia	--	--	--	--	--	--	--	--	--
Sierra Leone	6	22	26	26	299	37	2	104	490
Somali Republic	0	132	0	38	234	0	15	0	419
Somaliland, French 6/	57	502	15	28	885	3,319	32	36	4,796
South Africa, Republic of	91	4,521	822	3,626	3,774	8,8.	1,139	4,544	26,764
Sudan	196	1,096	1	650	2,077	1,751	403	33	6,010
Tanzania	80	701	51	147	1,470	0	91	71	2,480
Tunisia	0	7	1	16	0	135	77	107	362
Uganda	28	886	530	795	632	423	48	47	2,833
Zambia	27	1,112	135	210	1,585	107	167	154	3,395
Total		16,249		12,689	24,118	32,075	3,967	9,880	98,735
Asiatic Area:									
Afghanistan*	0	128	39	132	39	4	1	52	376
Australia	424	3,343	547	1,074	1,834	7,287	267	2,008	15,973
Brunei	0	0	0	3	0	0	19	13	37
Burma	0	0	0	0	0	0	99	63	162
Ceylon	0	705	362	1,450	2,919	5,383	77	373	10,907
Fiji	22	268	693	785	641	239	21	12	1,966
Hong Kong	44	948	2,572	4,171	4,318	14,963	208	711	25,421
India	0	0	401	4,836	0	383	688	1,485	7,814
Indonesia	0	0	0	3,072	0	0	0	2	3,074
Japan	--	64	--	--	9,355	62,340	3,054	53,444	128,257
Korea, South	19	19	--	--	284	509	68	240	1,120
Laos	67	374	2	85	275	79	25	30	872
Malaysia	28	924	145	784	3,435	225	219	223	5,792
New Caledonia	8	234	11	47	794	918	24	20	2,037
New Zealand	0	1,490	1,001	1,277	1,783	2	340	419	5,311
Pakistan	12	41	189	1,060	744	32	0	80	1,957
Philippines	63	200	0	119	0	32	887	200	1,318
Singapore	3,880	8,709	10,862	13,194	10,843	29,377	1,318	424	63,629
Taiwan	0	0	0	0	0	5,180	3	8	5,183
Thailand	74	1,292	401	995	7,496	1,471	703	148	11,707
Vietnam, South, and Cambodia 5/	1,431	11,392	26,061	28,835	14,636	4,198	221	1,297	60,449
Total		30,315		61,507	59,396	137,748	8,262	61,214	353,442
World Total (excluding Sino-Soviet area)		209,534		175,811	312,419	984,454	43,200	310,967	2,236,364

* Estimates based on latest available data.

1/ Includes other finished products and unfinished oils requiring further processing, including topped crude.

2/ Imports come into Kuwait.

3/ Formerly listed as Aden.

4/ Includes Central African Republic, Congo Republic, and Tchad.

5/ Includes Dahomey, Guinea, Ivory Coast, Mali, Mauritania, Niger, Senegal, Togo, and Upper Volta.

6/ Includes both military and civilian.

Table 6 - WORLD MOVEMENT OF CRUDE PETROLEUM:

(In thousand metric tons)

Exports of / Imports to	Year	WORLD	NORTH AMERICA	CARIBBEAN AMERICA			OTHER AMERICA	AFRICA							MIDDLE EAST		
			Total[1]	Total	Colombia	Venezuela	Total	Total	Algeria	Gabon	Libya	Nigeria	Tunisia	U.A.R. Egypt	Total	Iran	Iraq
WORLD.....	1965	664 740	14 730	129 300	5 610	121 390	450	99 220	24 430	1 280	38 470	13 230		1 620	358 350	72 920	61 640
	1966	745 410	16 910	124 650	4 920	117 910	590	126 700	31 600	1 430	72 230	19 250	620	1 530	405 550	93 640	65 230
	1967	810 930	23 900	133 330	4 310	126 460	1 720[2]	139 900	36 050	3 190	82 760	15 030	1 570	1 300	434 020	105 830	57 080
	1968	917 120	22 850	134 100	2 550	129 050	2 020[2]	180 780	39 510	3 840	124 720	7 000	2 140	3 400	487 780	115 780	70 390
NORTH AMERICA....	1965	82 940	14 550	38 490	2 190	34 800		3 580	490		1 930	1 015		230	23 230	6 260	1 120
	1966	92 160	16 710	34 350	2 010	31 350	160	6 930	190		4 030	2 400		210	21 660	7 110	2 330
	1967	80 570	20 810	35 510	1 640	32 580	1 000	3 290	40	130	3 190	1 780		150	14 990	6 000	970
	1968	89 550	22 640	37 830	1 660	35 100	1 200	8 050	250		5 490	830		1 550	15 950	5 660	30
Canada.....	1965	19 620		12 810		12 200		115				115			6 690	2 430	360
	1966	20 540		11 600		10 400		2 510			710	1 800			7 030	2 920	1 070
	1967	22 940	500	14 290		13 520		2 370			780	1 590			5 750	2 790	740
	1968	23 870		17 040		16 510		380				380			6 450	2 800	30
United States...	1965	63 290	14 590	25 670	2 180	22 600		3 460	420		1 910	900		290	16 540	3 830	760
	1966	61 630	16 710	23 350	2 010	20 950	160	4 320	190		3 320	600		210	14 630	4 190	1 200
	1967	57 670	20 310	21 220	1 640	19 060	1 000	2 900	40	130	2 410	190		150	9 240	3 210	230
	1968	65 670	22 630	20 790	1 660	18 590	1 200	7 710	250		5 490	470		1 550	9 500	2 860	
CARIB. AMERICA...	1965	57 670	45	59 550	1 770	57 180		15				15			4 550		
	1966	69 280	30	60 860	1 540	58 660	40	720		30	280	420			3 800		
	1967	72 640	90	65 230	1 380	63 020	150	2 140		410	1 320	210			1 190		
	1968	76 310	50	63 900	690	62 790	470	5 270		2 320	2 630	320			2 400		100
Cuba.....	1965	3 510															
	1966	3 840															
	1967	3 940															
	1968	4 000															
Jamaica.....	1965	1 290		1 290		1 290											
	1966	1 340		1 340		1 340											
	1967	910		910		910											
	1968	1 150		1 150		1 150											
Neth. Antilles..	1965	40 670		40 670		40 670											
	1966	39 660		39 170		39 170		490			70	420					
	1967	41 810		40 900		40 800		1 010		470	370	170					
	1968	39 550		37 700	190	37 510		1 840		1 360	190	290					
Panama.....	1965	2 370		2 270	130	2 240											
	1966	2 900		2 900	40	2 860											
	1967	2 830		2 830		2 830											
	1968	2 940		2 940		2 940											
Puerto Rico.....	1965	5 930		5 930		5 325											
	1966	6 670		6 650	60	5 920	40										
	1967	6 930		6 810	200	5 870	120										
	1968	7 940		6 220	390	5 600	170	1 000		280[2]	790[2]				640		50[2]
Trinidad.....	1965	12 730		8 170	1 640	6 530		15				15			4 550		
	1966	12 400		8 870	1 440	7 430		230		20	210				3 800		
	1967	11 510	80	10 290	1 180	9 100	30	970		20	950				140		
	1968	12 840	40	10 850	190	10 630	20	1 250		260	960	30			650		
Virgin Isl.(US).	1965																
	1966	500		500		500											
	1967	2 750		1 850		1 710		40				40			930		
	1968	5 100		3 000		2 890	270	1 220		430[2]	790[2]				650		50[2]
OTHER AMERICA....	1965	16 320		6 500	20	6 410	260	890	30			850			5 920	640	2 740
	1966	18 430		6 480		6 180	210	2 450	390	60		2 010			7 380	720	2 490
	1967	17 010		5 690	30	5 660	340	1 220	330		120	770			9 180	500	2 040
	1968	19 060		6 370		6 180	210	2 110	670		270	1 170			9 960		3 210
Argentina.....	1965	3 660		800		800	170	790				790			1 500	610	860
	1966	3 700		600		660	160	1 700	300			1 400			1 200	580	530
	1967	2 270		750		750	290	120	20			150			1 060	360	
	1968	1 800		650		650	110								1 040		30
Brazil.....	1965	10 000		3 790	20	3 710	100	60				60			3 690		1 880
	1966	11 260		3 420		3 220	50	450		60		390			5 350	140	1 950
	1967	10 460		2 170		2 170	50	770	150			620			6 890	60	1 750
	1968	12 690		2 420		2 220	100	1 750	540		200	1 010			8 020		3 000
Uruguay.....	1965	1 520		760		760		30	30						730		
	1966	1 600		470		470		260	40			220			850		
	1967	1 550		280		280		120			120				1 150		200
	1968	1 310		140		140		230			70	160			900		180

(For general note and footnotes, see end of table.).

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MOVEMENT OF CRUDE PETROLEUM: 1965 - 1968

(In thousand metric tons)

Exports of / Exports to	Year	WEST ASIA									FAR EAST		WESTERN EUROPE	COUNTRIES NES	Nigeria	Tunisia	U.A.R. Egypt
		Total *	Iran	Iraq	Kuwait 4/	Muscat and Oman	Qatar	Saudi Arabia	Syria	Trucial Oman	Total	Indonesia	Total	Total 5/			
WORLD	1965	358 350	72 820	61 640	113 700		10 930	85 560		13 700	18 530	13 020	450	43 720	13 230		1 620
	1966	405 550	83 640	65 200	121 310		13 820	104 100		17 480	19 680	12 840	750	50 650	19 250	620	1 530
	1967	434 020	105 830	57 020	121 550	3 150	15 440	112 500		18 530	22 830	15 230	910 3/	54 320	15 010	1 570	1 390
	1968	487 780	115 780	70 390	126 630	12 010	16 330	121 420	830	24 390	29 090	19 660	870 3/	59 590	7 000	2 140	3 400
NORTH AMERICA	1965	23 230	6 260	1 120	5 150		770	9 110		820	3 020	3 020			1 015		230
	1966	21 660	7 110	2 330	2 960		30	8 340		950	2 440	2 440			2 400		210
	1967	14 990	6 000	970	1 750			6 010		260	2 980	2 980			1 780		150
	1968	15 950	5 660	30	4 100			5 070		1 090	3 850	3 850			800		1 550
Canada	1965	6 690	2 430	360	980		200	2 590		130					115		
	1966	7 030	2 920	1 070	570			2 160		310					1 800		
	1967	5 750	2 790	740	220			2 000							1 590		
	1968	6 450	2 800	30	350			2 510		750					380		
United States	1965	16 540	3 830	760	4 170		570	6 520		690	3 020	3 020			900		230
	1966	14 630	4 190	1 260	2 330		30	6 180		640	2 440	2 440			600		210
	1967	9 440	3 210	230	1 530			4 010		260	2 980	2 980			190		150
	1968	9 500	2 860		3 740			2 560		340	3 850	3 850			420		1 550
CARIB. AMERICA	1965	4 550						4 550						3 510	15		
	1966	3 800						3 800						3 840	420		
	1967	1 190					540	140		510				3 840	210		
	1968	2 400		100			180	1 220		900	120	120		4 000	320		
Cuba	1965													3 510			
	1966													3 840			
	1967													3 840			
	1968													4 000			
Jamaica	1965																
	1966																
	1967																
	1968																
Neth. Antilles	1965														420		
	1966														170		
	1967														290		
	1968																
Panama	1965																
	1966																
	1967																
	1968																
Puerto Rico	1965																
	1966																
	1967																
	1968																
Trinidad	1965	640		50 2/				240 2/		350 2/							
	1966	4 550						4 550							15		
	1967	3 800						3 800									
	1968	140						140							30		
		690						690			120	120					
Virgin Isl. (US)	1965	930													40		
	1966	690		50 2/			480 2/			450 2/							
	1967							290 2/		350 2/							
	1968																
OTHER AMERICA	1965	5 920	640	2 740	1 740			710		90				2 760	850		
	1966	7 380	720	2 490	2 140			2 040						2 210	2 010		
	1967	9 180	500	2 040	1 550		250	4 630		210				580	770		
	1968	9 960		3 210	1 290		250	4 580		630				420	1 170		
Argentina	1965	1 500	640	860				70						400	790		
	1966	1 280	580	530				180		210					1 400		
	1967	1 060	360		130		180	180		210					150		
	1968	1 040		30			250	130		630							
Brazil	1965	3 690		1 880	1 100			710						2 350	60		
	1966	5 350	140	1 950	1 290			1 970						2 190	390		
	1967	6 490	60	1 750	810		70	4 200						560	620		
	1968	8 020		3 000	570			4 450						420	1 010		
Uruguay	1965	730			640					90					220		
	1966	850			850									20			
	1967	1 150		290	610			450							160		
	1968	900		180	720												

(For general note and footnotes, see end of table.)

Table 6 - WORLD MOVEMENT OF CRUDE PETROL

(In thousand metric tons

Exports of / Exports to	Year	WORLD	NORTH AMERICA	CARIBBEAN AMERICA			OTHER AMERICA	AFRICA									
			Total1/	Total	Colombia	Venezuela	Total	Total	Algeria	Gabon	Libya	Nigeria	Tunisia	U.A.R. Egypt	Total	Iran	
WESTERN EUROPE....	1965	324 550	50	24 230	1 650	22 550	130	92 310	23 380	1 150	55 380	11 150		1 070	192 680	32 950	4
	1966	375 040	60	22 750	1 370	21 220	170	113 600	29 830	950	67 260	14 310	620	520	219 200	31 710	2
	1967	410 240	2 910	26 290	1 270	24 760	210	129 050	34 210	1 960	77 580	12 150	1 570	550	228 690	40 160	4
	1968	487 170	50	25 230	210	24 420	170	161 840	37 290	900	115 610	4 710	2 140	1 120	253 810	36 700	3
Belgium-Lux.....	1965	15 200		760		760		3 180	920		1 550	670		40	11 260	5 440	
	1966	17 150		1 120		1 190		4 170	930	70	2 740	350	10	60	11 800	4 400	
	1967	17 700	30	2 050		2 050		5 740	1 000	150	4 390	40	20	90	9 890	3 300	
	1968	23 640		2 530		2 490		5 490	800	110	4 240	230	40	50	15 620	4 230	
Denmark.....	1965	3 220						830	30		630	160			2 390	530	
	1966	4 800		160		160		1 430			1 020	410			3 210	350	
	1967	6 520	60	340		340		2 170			1 740	430			3 950	290	
	1968	6 710		360		350		1 720	100		1 170	440			4 590	500	
Finland.....	1965	2 640													700	700	
	1966	3 640													1 060	1 060	
	1967	4 670		30		30									640	640	
	1968	5 880													1 270	1 260	
France.....	1965	58 560		2 600		2 600		24 880	17 380	1 050	5 610	760			30 300	5 930	
	1966	65 510		2 400		2 400		30 340	19 180	720	8 480	1 900			31 110	4 040	1
	1967	74 210		2 700		2 700		34 690	21 560	740	10 150	1 970	270		35 050	2 920	
	1968	78 520		2 350		2 350		36 310	24 400	510	10 720	310	280	50	38 260	3 030	1
Germany, Fed....	1965	58 670		3 400		3 400		27 790	2 550	30	23 000	2 210			24 860	6 120	
	1966	68 240		3 640		3 640		34 570	4 570	160	26 330	3 050	460		26 530	7 290	
	1967	68 910	290	2 760		2 760	50	31 370	6 270	310	21 210	2 650	870	50	29 980	6 440	
	1968	84 380		3 010		2 950	30	44 570	7 000		36 320	150	1 070	30	32 420	6 540	
Greece.....	1965	1 750													1 330	580	
	1966	3 110													2 640	740	
	1967	3 900						260	70		190				2 970	480	
	1968	4 210						60	60						3 520		
Ireland.....	1965	2 030													2 030	1 150	
	1966	1 570													1 570	310	
	1967	2 450		70		70		90			90				2 290	600	
	1968	2 040						240			240				1 800	350	
Italy.....	1965	66 010		680		660		7 260	590		5 300			770	51 460	3 750	
	1966	77 520		870		800		10 520	1 440		8 670		140	260	58 080	5 470	
	1967	86 660	60	1 740		1 640		18 760	1 460	150	16 600	30	110	410	55 460	4 510	
	1968	92 540		2 050		1 930		25 070	2 180		22 180	80	90	540	54 380	3 720	1
Netherlands.....	1965	25 940		2 040	310	1 730		5 390	1 175	60	3 865	290			18 250	3 950	
	1966	31 800		1 515	25	1 490		7 250	630		6 050	570			22 780	2 650	
	1967	34 010	110	2 050		2 050		9 140	390	380	7 000	1 370			22 650	2 220	
	1968	36 480		1 280		1 240		9 140	50	150	8 050	480		410	25 750	3 670	
Norway.....	1965	2 780		1 320		1 320		515			515				940		
	1966	2 890		1 260		1 260		570			510	60			1 060		
	1967	3 190		1 200		1 200		910	30		880				1 040		
	1968	5 110		1 180		1 180		1 470			1 380	90			2 450	260	
Portugal.....	1965	1 730						110							1 620	25	
	1966	1 680													1 680		
	1967	2 090		150		150									1 940	100	
	1968	1 860		30		30		20							1 810		
Spain2/.....	1965	13 450		2 660	335	2 320		2 365			2 110			255	8 050	200	
	1966	16 490		2 540	260	2 280		3 310	290		2 780	40		200	10 480	100	
	1967	21 230	70	3 130	280	2 850		4 670	320		3 660	670			12 880	470	
	1968	28 450		3 290	30	3 260		8 300	30		7 350	920			16 630	1 110	
Sweden.....	1965	3 700		1 760		1 760		220	165			55			1 720	370	
	1966	3 890		1 060		1 060		950	510			440			1 880	110	
	1967	5 770		760		760		1 370	390		230	730			3 640	560	
	1968	9 090		1 450		1 450		280	90		60	110			6 940	2 250	
Switzerland.....	1965	1 580						600			600				60		
	1966	2 700						1 300	670		630				800		
	1967	3 830						3 220	2 020		830	80	290		610	80	
	1968	4 540						3 620	1 850		1 110		660		900		
United Kingdom..	1965	65 530	50	9 010	1 000	8 000	130	19 050	450		11 600	7 000			37 290	4 210	10
	1966	70 800	60	8 110	1 090	6 930	170	19 120	1 560		10 050	7 490			43 260	4 400	10
	1967	71 270	2 290	9 240	990	8 100	170	14 970	640	220	10 000	4 110			44 530	17 050	
	1968	79 530	50	7 570	180	7 060	140	25 280	700	130	22 500	1 990		50	46 310	9 610	

(For general note and footnotes, see end of table.).

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MOVEMENT OF CRUDE PETROLEUM: 1965 - 1968

(In thousand metric tons)

ria	Tunisia	U.A.R. Egypt	WEST ASIA: Total	Iran	Iraq	Kuwait 4/	Muscat and Oman	Qatar	Saudi Arabia	Syria	Trucial Oman	FAR EAST: Total	Indonesia	WESTERN EUROPE: Total	COUNTRIES N.S: Total 3/	Year / Exports to
150		1 070	192 680	32 950	45 560	62 900		3 750	38 950		8 570	30		450	14 690	1965 WESTERN EUROPE
310	620	520	219 200	31 710	47 360	67 390		7 750	54 240		10 840	250		720	18 210	1966
150	1 570	550	228 680	40 160	42 570	64 340	1 950	9 280	59 710		10 830	110	50	810	23 180	1967
710	2 140	1 120	253 810	38 700	37 010	65 180	6 190	11 850	62 770	690	13 420	180	30	870	25 160	1968
670		40	11 260	5 440	1 400	3 160			860		400					1965 Belgium-Lux.
350	10	60	11 800	4 600	1 730	3 400			1 420		650					1966
40	20	90	9 890	3 300	2 040	2 760		220	750		940					1967
230	40	50	15 620	4 230	4 150	3 070	300	320	2 870		680					1968
160			2 390	530		1 060			800					10		1965 Denmark
410			3 210	350	180	1 300		240	1 040		100					1966
430			3 950	290		1 840	190	500	830		300					1967
440			4 590	500	40	2 010	300	600	840		300			40		1968
			700	700											1 940	1965 Finland
			1 060	1 060										10	2 570	1966
			640	640										30	3 970	1967
			1 270	1 260						10					4 610	1968
760			30 300	5 930	9 810	8 810		1 300	2 550		1 900				780	1965 France
900			31 110	4 040	10 590	8 340		1 650	3 050		3 450				1 660	1966
970	270		35 050	2 920	14 330	8 860		2 220	4 060		2 660				1 770	1967
310	280	50	38 260	3 030	15 160	7 790	810	2 590	4 370		4 510				1 600	1968
210			24 860	6 120	5 180	2 560		20	8 100		2 880			35	2 580	1965 Germany, Fed.
050	460		26 530	7 290	4 080	2 150		100	9 070		3 900			170	3 340	1966
650	870	50	29 980	6 440	5 570	3 490	1 050	1 470	11 700		4 260			250	4 220	1967
150	1 070	30	32 420	6 540	4 740	2 680	720	1 280	13 440		5 020			180	4 190	1968
			1 330	580					750						420	1965 Greece
			2 640	740					1 900						470	1966
			2 970	480	800				1 690						670	1967
			3 520		1 610				1 910						630	1968
			2 030	1 150	640				240							1965 Ireland
			1 570	310	1 080				180							1966
			2 290	600	750	150		40	750							1967
			1 800	350	1 000	40			410							1968
		770	51 460	3 750	8 400	26 130		600	12 450		130				6 610	1965 Italy
	140	260	58 080	5 470	8 450	25 300		1 140	17 450		270				8 050	1966
30	110	410	55 460	4 510	9 760	24 220		1 550	14 820		400	50	50		10 630	1967
80	90	540	54 380	3 720	17 590	17 230	170	2 340	12 290	600	440				11 040	1968
290			18 250	3 950	5 400	5 100		1 010	2 560		230	30		235		1965 Netherlands
570			22 780	2 650	5 640	7 100		1 380	5 870		140	170		90		1966
370			22 650	2 220	4 860	7 940	500	1 290	5 160		680			50		1967
480		410	25 750	3 670	4 950	10 630	400	650	5 060		410			320		1968
			940		220			20	700							1965 Norway
60			1 060		710				350							1966
			1 040		260	400			380					30		1967
90			2 450	260	490	400	560	60	680							1968
			1 620	25	1 290			150			150					1965 Portugal
			1 680		1 200			250			230					1966
			1 940	100	970			290	110		450					1967
			1 810		2 330		160	160			160					1968
		255	8 050	200	1 630	1 420			4 800						380	1965 Spain 5/
40		200	10 480	100	2 090	1 750			6 540						160	1966
670			12 830	470	2 790	1 530		100	7 880		110			20	460	1967
920			16 630	1 210	3 640	1 880			10 000						310	1968
55			1 720	370	650				700							1965 Sweden
440			1 880	110	490	500			780							1966
730			3 640	560	320	690	210	720	1 230							1967
110			6 940	2 250	400	640	1 170	600	1 630		50				440	1968
			60			60									920	1965 Switzerland
			800			340		250			210				600	1966
80	290		610	80		190		170			170					1967
	660		920			340	200	190			190					1968
7 900			37 290	4 210	10 510	14 600		650	4 440		2 880					1965 United Kingdom
7 490			43 260	4 400	10 440	17 200		2 740	6 590		1 690	85				1966
110			44 530	17 050	3 410	12 020	140	610	13 350		960	60		20		1967
1 990		90	46 310	9 610	3 020	18 490	1 400	3 060	9 070		1 660	180	30			1968

(For general note and footnotes, see end of table.)

Table 6 - WORLD MOVEMENT OF CRUDE PETROLEUM: 19

(In thousand metric tons)

Exports of / To — Year	WORLD	NORTH AMERICA	CARIBBEAN AMERICA			OTHER AMERICA	AFRICA							WEST
		Total [1]	Total	Colombia	Venezuela	Total	Total	Algeria	Gabon	Libya	Nigeria	Tunisia	U.A.R Egypt	Total
(continued)														
ia..... 1965	1 140						120	120						430
1966	2 100		20		20		80	80						1 340
1967	2 640		60		60		690	60		570	60			1 160
1968	2 700		130		130		320	30		290				1 020
..... 1965	23 480													23 480
1966	24 190						490		20	470				23 700
1967	24 560						840		20	490	30		300	23 720
1968	22 250						730			540			190	21 520
..... 1965	6 700													6 700
1966	6 700													6 700
1967	8 440													8 440
1968	7 550													7 550
..... 1965	1 470													1 470
1966	1 650													1 650
1967	1 720													1 720
1968	1 800													1 800
n Yemen... 1965	6 990													6 990
1966	6 970													6 970
1967	6 210						300						300	5 910
1968	5 300						190						190	5 110
..... 1965	3 010													3 010
1966	3 120						470			470				2 650
1967	3 000						520			490	30			2 480
1968	3 420						540			540				2 880
..... 1965	97 220	40	450		450	30								83 000
1966	115 890	110	480		480	20								100 020
1967	140 950	90	440		440	20	50	10			40			123 990
1968	171 020	140	490		490	30	220						220	150 280
aiwan..... 1965	1 740													1 740
1966	2 200													2 200
1967	2 190													2 190
1968	2 960													2 960
..... 1965	6 730													6 630
1966	7 000													7 000
1967	8 680													8 680
1968	10 510													10 510
..... 1965	70 300	40	450		450	30								62 290
1966	84 370	110	480		480	20								75 860
1967	103 100	90	440		440	20	50	10			40			94 240
1968	121 200	140	480		480	30	220						220	109 980
Rep. of... 1965	1 400													1 390
1966	1 850													1 840
1967	2 370													2 370
1968	4 790		10		10									4 780
..... 1965	1 860													1 860
1966	2 290													2 290
1967	2 440													2 440
1968	2 880													2 830
ines..... 1965	4 700													2 920
1966	4 940													2 830
1967	6 490													3 980
1968	7 680													4 760
..... 1965	3 530													
1966	4 630													
1967	5 050													
1968	5 930													
re..... 1965	2 540													2 380
1966	3 620													3 410
1967	5 390													5 150
1968	9 160													8 670
d..... 1965	1 350													1 350
1966	2 130													2 090
1967	2 210													2 140
1968	2 430													2 390

Exports of / To — Year	WEST			
	Total	Iran	Iraq	Kuwait [4]
(continued)				
ia..... 1965	430		430	
1966	1 340	590	750	
1967	1 160	500	500	60
1968	1 020	170	850	
..... 1965	23 480	6 810	3 050	2 420
1966	23 700	6 660	3 430	2 420
1967	23 720	5 590	3 570	2 850
1968	21 520	5 050	4 120	2 270
..... 1965	6 700			
1966	6 700			
1967	8 440			
1968	7 550			
..... 1965	1 470		750	
1966	1 650		820	
1967	1 720		690	
1968	1 800		1 020	
n Yemen... 1965	6 990	2 920	320	2 420
1966	6 970	2 450	530	2 420
1967	5 910	1 910	300	2 850
1968	5 110	2 350		2 270
..... 1965	3 010		960	
1966	2 650		1 030	
1967	2 480		1 510	
1968	2 880		2 040	
..... 1965	83 000	21 190	5 560	36 140
1966	100 020	30 630	6 370	40 330
1967	123 990	45 350	4 100	45 010
1968	150 280	58 280	2 400	47 500
aiwan..... 1965	1 740		180	1 060
1966	2 200		330 [2]	1 720
1967	2 190		160 [2]	1 430
1968	2 960		450 [2]	2 400
..... 1965	6 630	3 180 [3]		1 250
1966	7 000	2 830 [3]		1 910
1967	8 680	4 620 [3]		1 190
1968	10 510	5 880 [3]		130
..... 1965	62 290	14 900	4 620	28 710
1966	75 860	23 650	4 400	31 650
1967	94 240	35 960	2 760	34 850
1968	109 980	45 330	1 650	32 690
Rep. of... 1965	1 390	480		910
1966	1 840	780		1 060
1967	2 370	1 250		1 120
1968	4 780	2 410		2 350
..... 1965	1 860			1 060
1966	2 290			550
1967	2 440			1 060
1968	2 830			1 320
ines..... 1965	2 920	620	720	230
1966	2 830	790	850	240
1967	3 980	460	550	1 210
1968	4 760	720		1 470
..... 1965				
1966				
1967				
1968				
re..... 1965	2 380	100		2 280
1966	3 410	80	240	2 610
1967	5 150	610	330	4 110
1968	8 670	1 060	80	7 070
d..... 1965	1 350		40	110
1966	2 090		550 [2]	150
1967	2 140		300 [2]	40
1968	2 390	40	270 [2]	70

(General note and footnotes, see end of table.).

VEMENT OF CRUDE PETROLEUM: 1965 - 1968

n thousand metric tons)

Tunisia	U.A.R Egypt	WEST ASIA: Total	Iran	Iraq	Kuwait 4/	Muscat and Oman	Qatar	Saudi Arabia	Syria	Trucial Oman	FAR EAST: Total	Indonesia	WESTERN EUROPE: Total	COUNTRIES NES: Total 5/	Exports of / Year / Exports to
															W. EUROPE (cont.)
		430		430										590	1965 Yugoslavia
		1 340	590	750										660	1966
		1 160	500	500	60	100								730	1967
		1 020	170	850										1 230	1968
		23 480	6 810	3 050	2 420		1 430	9 060		710					1965 WEST ASIA
		23 700	6 660	3 430	2 420		1 040	8 950		1 200					1966
	300	23 720	5 590	3 570	2 850		440	10 590		680					1967
	190	21 520	5 050	4 120	2 270			9 620		460					1968
		6 700						6 700							1965 Bahrain
		6 700						6 700							1966
		8 440						8 440							1967
		7 550						7 550							1968
		1 470		750				720							1965 Lebanon
		1 650		820				830							1966
		1 720		690				1 030							1967
		1 800		1 020				780							1968
		6 990	2 920	320	2 420		620			710					1965 Southern Yemen
		6 970	2 450	530	2 420		370			1 200					1966
	300	5 910	1 910	300	2 850		140	30		680					1967
	190	5 110	2 350		2 270			30		460					1968
		3 010		960			810	1 240							1965 Turkey
		2 650		1 030			670	950							1966
		2 480		1 510			300	670							1967
		2 880		2 040				840							1968
		83 000	21 190	5 560	36 140		2 160	17 350		600	11 240	6 440		2 460	1965 FAR EAST
		100 020	30 630	6 370	40 330		1 470	19 940		1 280	12 260	6 510		3 000	1966
	220	123 990	45 350	4 100	45 010	950	1 200	24 940		2 440	14 490	8 060		1 880	1967
	220	150 280	58 280	2 400	47 500	3 520	1 170	32 680		4 730	19 020	11 120		940	1968
		1 740		180	1 060			500							1965 China Taiwan
		2 200		330	1 720			150							1966
		2 190		160	1 430			600							1967
		2 960		450	2 400			110							1968
		6 630	3 180		1 250			2 200			100	100			1965 India
		7 000	2 830		1 910			2 260							1966
		8 680	4 620		1 190			2 870							1967
		10 510	5 880		130			4 500							1968
		62 290	14 900	4 620	28 710		460	13 000		600	5 170	5 010		2 320	1965 Japan
		75 860	23 650	4 400	31 650		780	14 790		590	5 120	4 960		2 790	1966
	220	94 240	35 960	2 760	34 850	950	400	19 030		1 290	6 570	6 300		3 800	1967
	220	109 980	45 330	1 650	32 690	3 520	310	22 740		3 740	9 520	9 330		930	1968
		1 390	480		910						5				1965 Korea, Rep. of
		1 840	780		1 060						10				1966
		2 370	1 250		1 120										1967
		4 780	2 410		2 350			20							1968
		1 860			1 060			800							1965 Malaya
		2 290			550			1 330							1966
		2 440			1 060			1 380							1967
		2 830			1 320			1 560							1968
		2 920	620	720	230		520	820			1 780	1 250			1965 Philippines
		2 830	790	650	240			950			2 110	1 520			1966
		3 980	460	550	1 210			1 760			2 510	1 690			1967
		4 760	720		1 470			2 580			2 920	1 750			1968
											3 930				1965 Sarawak
											4 630				1966
											5 050				1967
											5 930				1968
		2 380	100		2 280						160				1965 Singapore
		3 410	80	240	2 630			460			210				1966
		5 150	610	330	4 110			100			240				1967
		8 670	1 060	80	7 070			420		40	490				1968
		1 350		40	110		1 180	20							1965 Thailand
		2 080		550	150		690			690	50	10			1966
		2 140		300	40		800	200		800	70	70			1967
		2 380	40	200	70		860	750		450	40	40			1968

(For general note and footnotes, see end of table.)

Table 6 - WORLD MOVEMENT OF CRUDE PETROLEUM: 19

(In thousand metric tons)

orts of / Year	WORLD	NORTH AMERICA	CARIBBEAN AMERICA			OTHER AMERICA	AFRICA							WEST
		Total 1/	Total	Colombia	Venezuela	Total	Total	Algeria	Gabon	Libya	Nigeria	Tunisia	U.A.R. Egypt	Total
..... 1965	17 810													13 570
1966	20 170		30		30		80				80			15 320
1967	21 350													16 100
1968	21 410						240		40				200	15 240
.....1965	15 010						2 150	600	130	1 180	200		30	11 160
1966	16 830						1 760	1 150	360	220	30			12 990
1967	17 680						1 750	1 200	460	60	30			13 890
1968	17 560		70		70		1 790	1 180	590	20				14 060
..... 1965	790						200			90	110			
1966	600													
1967	720						30			30				240
1968	710													430
..... 1965	1 800													1 800
1966	1 860													1 860
1967	1 920													1 920
1968	1 960													1 960
..... 1965	1 000						410	310			100			180
1966	1 120						370	340			30			220
1967	1 210						450	420		30				180
1968	1 290		10		10		400	400						340
..... 1965	720						350			320			30	370
1966	760						110			110				650
1967	270													270
1968														
ca..... 1965	4 680													4 680
1966	5 500													5 500
1967	7 150													7 150
1968	7 460													7 460
pt..... 1965	3 960						770			770				2 500
1966	3 990						140	30		110				2 890
1967	2 440						210	210						1 230
1968	1 240						290	270		20				50
ES..... 1965	18 890						285						285	
1966	22 060						800						800	
1967	24 040						560	260					300	570
1968	28 620						400	120		160			120	800
..... 1965	2 150													
1966	2 620													
1967	2 820						10	10						120
1968	3 310													120
akia... 1965	6 140						175						175	
1966	6 520						130						130	
1967	7 460						40						40	
1968	7 810													
ast.... 1965	5 130						110						110	
1966	6 390						120						120	
1967	7 040						290	190					100	450
1968	8 040						120						120	350
..... 1965	2 050													
1966	3 030						550						550	
1967	2 960						170						170	
1968	3 220													
..... 1965	3 210													
1966	3 350													
1967	3 610													
1968	5 580													
ION.... 1965	890		90											770
1966	1 410													1 410
1967	1 880		170											1 710
1968	4 170		310				90					36		3 760

WEST			
Total	Iran	Iraq	Kuwait
13 570	2 180	1 170	3 790
15 320	2 130	1 350	4 790
16 100	1 910	1 170	5 710
15 240	2 250	1 120	6 090
11 160	2 800	2 440	1 560
12 990	4 410	1 880	1 560
13 890	5 730	2 600	1 [illegible]
14 060	6 930	2 400	2 [illegible]
240			
430	260		
1 800	770	450	580
1 860	1 270	120	470
1 920	1 570		80
1 960	1 410		
180			40
220			
180			
340			
370	280		80
650	470		190
270	250		20
4 680	900	1 090	
5 500	1 690 2/	860 2/	
7 150	2 350 2/	1 770 2/	
7 460	3 600 2/	1 500 2/	
2 500		120	860
2 890		200	690
1 230			320
50			
570	570		
800	710		
120	120		
120	30		
450	450		
350	350		
770			
1 410	270		
1 710			
3 760	200		

Note: The data are based on the general trade system.
In some cases figures are the result of reconciliation of export and import data.
1/ In 1967 almost entirely exports of Canada.
In 1968 from: Canada 20 310, USA 3 990
In 1968 from: Canada 22 435, USA 245.

2/ In 1968 from: Peru 490, Ecuador 35, Bolivia 1 355, Argentina 190.
3/ In 1968 from: United Kingdom 330, Yugoslavia 290, Norway 40, Germany, Fed. Rep. 30, Belgium-Luxembourg 150, Netherlands 20.
4/ Includes exports of the Neutral Zone; but excludes Neutral Zone's deliveries to Kuwait.

5/ Almost entirely exports of U.S.S.R.
6/ Includes the Canary Islands.
7/ In 1968 for Australia 18 990 and Ne
8/ Mainly exports of Brunei.
9/ Estimated.

MOVEMENT OF CRUDE PETROLEUM: 1965 - 1968

(In thousand metric tons)

Exports of / Year / Exports to	WEST ASIA									FAR EAST		WESTERN EUROPE	COUNTRIES NES	
	Total	Iran	Iraq	Kuwait a/	Muscat and Oman	Qatar	Saudi Arabia	Syria	Trucial Oman	Total	Indonesia	Total	Total b/	
1965 OCEANIA c/	13 570	2 180	1 170	3 790		1 620	4 160		650	4 240	3 550			80
1966	15 320	2 130	1 350	4 780		1 530	4 500		1 030	4 740	3 880			80
1967	16 100	1 910	1 170	5 710		630	4 850		1 830	5 250	4 140			.
1968	15 240	2 250	1 120	6 090		810	4 280		690	5 900	4 550			200
1965 AFRICA	11 160	2 800	2 440	1 560		1 200	1 670		1 490				1 700	200
1966	12 910	4 430	1 880	1 360		1 520	2 290		1 520				2 090	30
1967	13 890	5 750	2 600	140		2 240	1 630		1 130				2 040	30
1968	14 060	6 930	2 400	200		1 290	1 200	50	1 990				1 670	
1965 Ghana													590	110
1966													600	
1967	240					120			120				450	
1968	420	260				120			100				230	
1965 Kenya	1 800	770	450	580										
1966	1 860	1 270	120	470										
1967	1 920	1 570		80			270							
1968	1 960	1 410					550							
1965 Morocco	180			40			140						420	100
1966	220						220						530	30
1967	180						180						580	
1968	340						290	50					540	
1965 Tunisia	370	280		80			10							30
1966	650	470		180										
1967	270	250		20										
1968														
1965 South Africa	4 680	900	1 090			1 200 d/			1 490 d/					
1966	5 500	1 690 d/	860 d/			1 470 d/			1 480 d/					
1967	7 150	2 350 d/	1 770 d/			2 020 d/			1 010 d/					
1968	7 460	3 600 d/	1 500 d/			1 040 d/			1 320 d/					
1965 U.A.R. Egypt	2 500		120	860			1 520						690	30
1966	2 890		200	690			2 000						960	
1967	1 230			320			910						1 000	
1968	50						50						900	
1965 COUNTRIES NES													19 600	285
1966												30	21 240	800
1967	570	570										100	22 810	300
1968	800	710						90					27 420	120
1965 Bulgaria													2 150	
1966													2 620	
1967	120	120											2 690	
1968	120	30						90					3 190	
1965 Czechoslovakia													5 960	175
1966													6 400	130
1967													7 420	40
1968													7 810	
1965 Germany, East													5 020	110
1966												30	6 240	120
1967	450	450										100	6 200	100
1968	350	350											7 570	120
1965 Hungary													2 050	550
1966													2 470	170
1967													2 790	
1968													3 220	
1965 Poland													3 210	
1966													3 350	
1967													3 610	
1968													5 500	
1965 UNSPECIFIED DESTINATIONS	770								770 d/					
1966	1 410	270				480 d/			660 d/					
1967	1 710				210 d/	860 d/			640 d/					
1968	3 760	200			2 300 d/	780 d/			480 d/					

a 1 355, Argentina 190.
ia 290, Norway 40,
50, Netherlands 20.
Excludes

a/ Almost entirely exports of U.S.S.R.
b/ Includes the Canary Islands.
c/ In 1968 for Australia 18 990 and New Zealand 2 420.
d/ Mainly exports of Brunei.
e/ Estimated.

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B

TABLE 7

FREE WORLD INTERNATIONAL FLOW OF PETROLEUM 1970

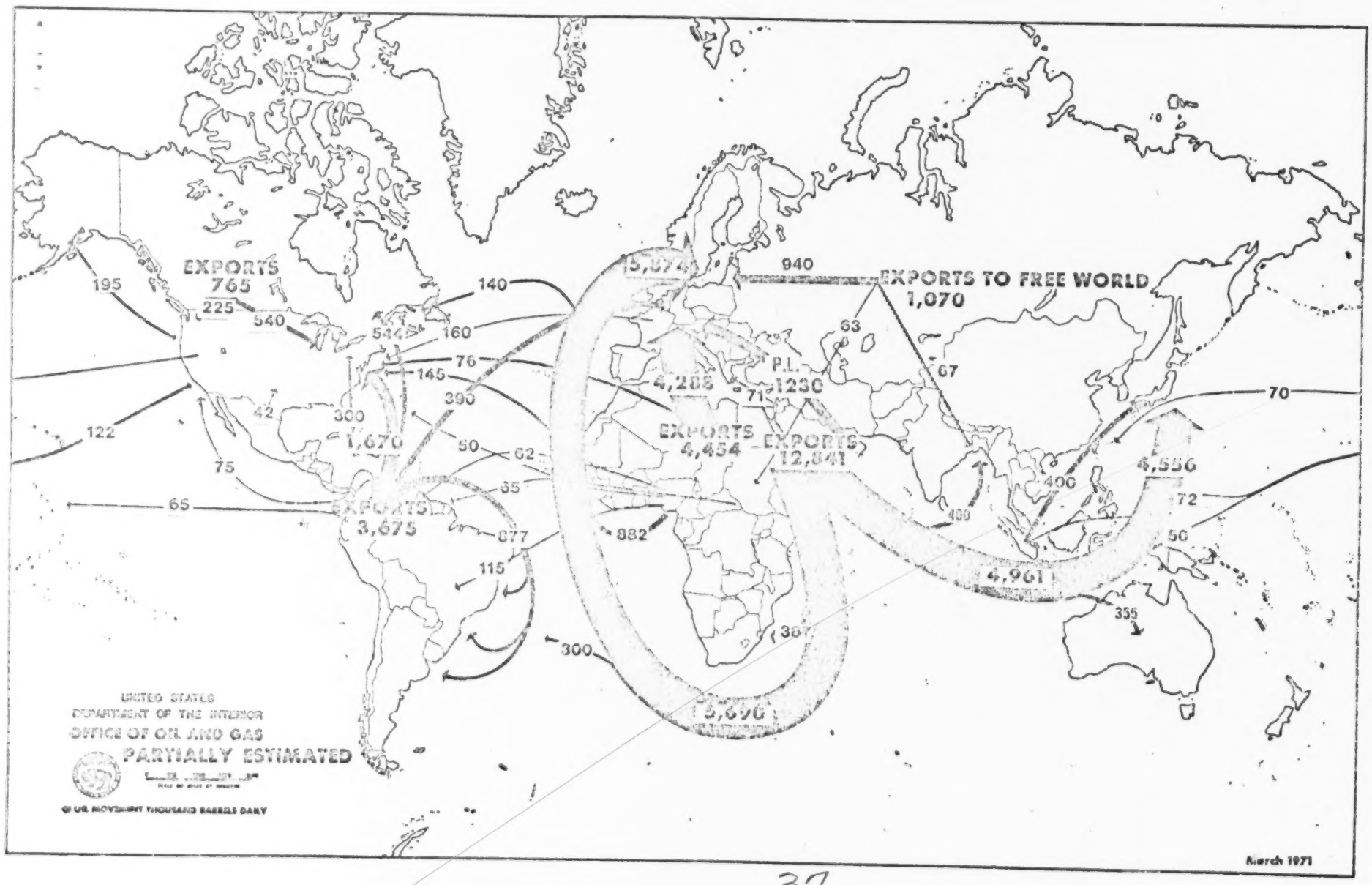

Table 8.

Crude Oil Imports into Japan, 1969

Field/Crude	Country	Barrels Daily	% Sulfur
Arabian heavy	Saudi Arabia	10,206	2.81
Arabian light	Saudi Arabia	145,497	1.70
Arabian light special	Saudi Arabia	62,909	1.67
Arabian medium	Saudi Arabia	8,255	2.36
Arabian medium special	Saudi Arabia	203,287	2.16
Arabian special	Saudi Arabia	37,431	2.15
Arabian heavy special	Saudi Arabia	17,413	2.11
Special Arabian heavy	Saudi Arabia	17,085	2.10
Bunju	Indonesia	5,910	0.12
Cabinda	Angola	730	0.20
Coalinga	United States	861	0.23
Darius	Iran	10,972	2.52
Duri	Indonesia	40,276	0.24
Ekhabin	U.S.S.R.	10,787	0.39
Hout	Neutral Zone	15,879	1.65
Iranian heavy	Iran	908,999	1.66
Iranian light	Iran	269,088	1.46
Khafji	Neutral Zone	232,660	2.90
Khafji special	Neutral Zone	50,738	2.78
Kuwait	Kuwait	207,810	2.55
Kuwait special	Kuwait	46,162	2.45
Minas	Indonesia	159,170	0.10
Minas topped	Indonesia	36	0.30
Monagas	Venezuela	4,576	2.32
Morgan	Egypt	17,597	1.65
Murban	Abu Dhabi	109,755	0.80
Neutral Zone	Neutral Zone	7,712	1.81
North Sumatra	Indonesia	14,599	0.05
Nigeria	Nigeria	814	0.15
Oman	Muscat and Oman	92,015	1.30
Pematang	Indonesia	26,613	0.16
Qatar	Qatar	3,450	1.11
Rostam	Iran	1,078	1.40
Raw oil	Unknown	1,687	0.12
Raw oil special	Unknown	1,357	0.12
Sassan	Iran	20,968	2.09
Seria	Brunei	1,655	0.08
Umm Shaif	Abu Dhabi	1,200	1.37
Sumatra medium	Indonesia	41,136	0.13
Zakum	Abu Dhabi	4,275	1.12
Tia Juana	Venezuela	536	2.20
Wafra	Neutral Zone	1,793	3.88
Wafra special	Neutral Zone	30,931	3.45
Zubair	Iraq	4,246	1.99
Total/Average		2,850,172	1.71

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15. Supplementary Notes			

16. Abstracts

A complete inventory was performed to determine the availability of source materials which provide supply-demand statistics for foreign countries. Special effort was made to determine the availability of sources which report the sulfur content of crude oil and residual fuel oil. The inventory revealed that approximately 500 publications must be perused for extractive data in order to obtain annual foreign petroleum supply and demand statistics. This report presents an evaluation of available source material on: crude oil reserves; crude oil production; crude oil refined products trade; refining capacity and production; refined products consumption and international bunkering. An analysis is presented of foreign refineries and transport problems.

17. Key Words and Document Analysis. 17a. Descriptors

Surveys
Availability
Statistical data
Demand (economics)
Supply (economics)
Crude oil
Residual oils
Reserves
Petroleum refining
Petroleum transportation
Consumption
Trade
International trade
Desulfurization

17b. Identifiers/Open-Ended Terms

International

17c. COSATI Field/Group 5C

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